Appendix A

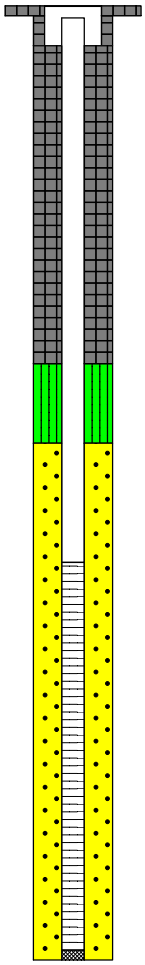
TRC BORING LOG and WELL CONSTRUCTION

MW-53R

Client: HollyFrontier Navajo Refining LLC	TRC Project #: 387273.0000.0000
Site: Artesia Refinery	Start Date: 9/23/2020
Address: 501 E Main St, Artesia NM	Finish Date: 9/23/2020
Project: Damaged Well Replacement	Permit #: RA-12950
Drilling Company: Talon LPE — Drilling Crew: R. Rodriguez & crew	TRC Site Rep.: John O'Neal
Drilling Method: Hollow-Stem Auger	TRC Reviewer: Jason Jayroe
Boring Diameter (in): 7.88 — Boring Depth (ft bgs): 24.0	Coord. System: NAVD88
Sampling Method: 5-ft Continuous Core Sampler	Northing: 673615.989
Blow Count Method: NA	Easting: 521463.004
Field Screening Parameter: Volatile Organic Compounds	Elevation Datum: NAD 1983
Meter: MiniRAE PID — Units: ppm	Ground Elevation (ft): 3368.87
Well Depth (ft bgs): 24.0 — Well Depth (ft toc): 24.30	Well Elevation (ft): 3368.75
Casing Length (ft): 13.93 — Screen Length (ft): 10.0	Well Measuring Point: Top of casing
Surface Completion: Flush mount steel cover with concrete pad	Depth to Water (ft toc): 14.21
Well Development: Pump and surge 20 gallons	Date/Time: 9/25/2020 09:25

Elevation (ft)	Depth (ft)	Water Level	Sample Analytical	Field Screening (PID)	Lithologic Description
3370	0			2.9	ML: Silt (grey/brown), unconsolidated, dry, friable, no odor, no staining.
				1.1	
				NR	
3365				0.0	CL: Silty clay (brown), trace fine sand, trace caliche (white), dry, no odor, no staining.
	5			1.0	
				NR	
				NR	Increase in caliche at 7.5 feet bgs.
				0.4	
3360				0.4	
	10			0.3	CL: Clay (light brown), few silt, some caliche, moderate plasticity, medium stiffness, moist, no odor, no staining.
				NR	
				NR	
				0.4	
3355		▼		0.6	
	15			0.8	
				NR	
				4.0	
				2.0	
3350				2.0	
	20			NR	CL: Clay (light brown), some caliche (white), moderate plasticity, stiff, moist, no odor, no staining.
				0.3	
				0.3	
				0.6	
3345				0.3	THIS WELL DIAGRAM SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT
	25				

Well Construction Diagram



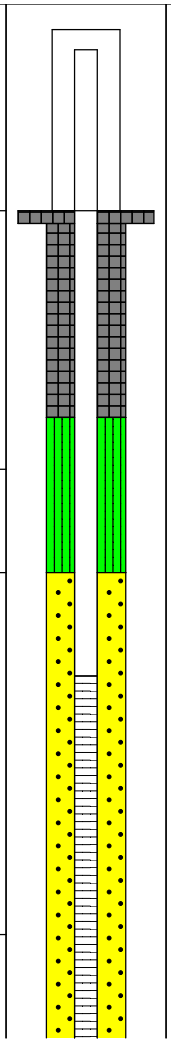
TRC BORING LOG and WELL CONSTRUCTION

MW-145

Client: HollyFrontier Navajo Refining LLC	TRC Project #: 403125.0000.0000
Site: Artesia Refinery	Start Date: 9/22/2020
Address: 501 E Main St, Artesia NM	Finish Date: 9/22/2020
Project: Downgradient Well Installation	Permit #: RA-12950
Drilling Company: Talon LPE — Drilling Crew: R. Rodriguez & crew	TRC Site Rep.: John O'Neal
Drilling Method: Hollow-Stem Auger	TRC Reviewer: Jason Jayroe
Boring Diameter (in): 7.88 — Boring Depth (ft bgs): 29	Coord. System: NAVD88
Sampling Method: 5-ft Continuous Core Sampler	Northing: 672914.535
Blow Count Method: NA	Easting: 527283.916
Field Screening Parameter: Volatile Organic Compounds	Elevation Datum: NAD 1983
Meter: MiniRAE PID — Units: ppm	Ground Elevation (ft): 3343.94
Well Depth (ft bgs): 29.0 — Well Depth (ft toc): 32.36	Well Elevation (ft): 3347.07
Casing Length (ft): 12.11 — Screen Length (ft): 20.0	Well Measuring Point: Top of casing
Surface Completion: Stick-up casing w/ steel protective cover and concrete pad	Depth to Water (ft toc): 20.22
Well Development: Pump and surge 52 gallons	Date/Time: 9/25/2020

Elevation (ft)	Depth (ft)	Sample: Water Level	Sample: Analytical	Sample: Field Screening (PID)	Lithology	Lithologic Description
3345						
	0			0.3		ML: Clayey silt (light tan), unconsolidated, dry, no odor, no staining.
				0.2		
				0.4		
3340				0.4		Trace caliche nodules at 4 feet bgs.
	5			0.1		No recovery from 5 to 7 feet bgs.
				NR		
				NR		
				0.3		CL: Silty clay, some very fine sand (white/tan), few caliche nodules (white), very stiff, low plasticity, dry, no odor, no staining.
				0.4		
3335				NR		
	10			0.1		
				NR		
				0.8		
				0.8		
				0.8		
3330				0.3		CL: Sandy clay (grey to light brown), some caliche nodules (white/tan), low plasticity, moist, no odor, no staining.
	15			0.7		

Well Construction Diagram



BORING LOG and WELL CONSTRUCTION

MW-145

Client: HollyFrontier Navajo Refining LLC | Site: Artesia Refinery | Page 2 of 2

Elevation (ft)	Depth (ft)	Water Level	Sample Analytical	Field Screening (PID)	Lithology	Lithologic Description	Well Construction Diagram
				0.8			
				0.4		Wet at 17.5 feet bgs.	8/16 Grade Silica Sand
				0.5			
3325							
	20					No recovery from 20 to 22.5 feet bgs.	2-inch Sch. 40 PVC 0.010" Slotted Screen
						GC: Gravel with clay, wet, no odor, no staining.	
3320						SC: Fine sand with clay (orange/green to grey), well graded, medium dense, wet, no odor, no staining.	
	25						
						CL: Sandy clay (red/brown), medium stiff, low plasticity, moist, no odor, no staining.	
3315							2-inch Sch. 40 PVC Endcap, 0.25 feet
	30					THIS WELL DIAGRAM SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT	
3310							
	35						

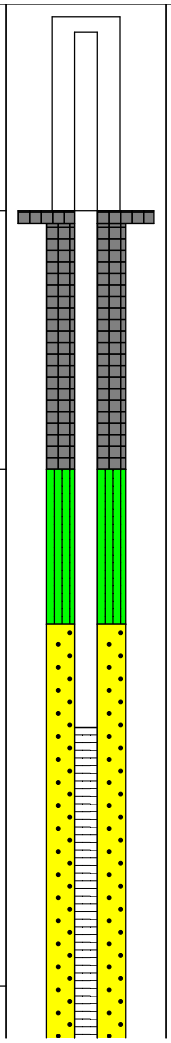
TRC BORING LOG and WELL CONSTRUCTION

MW-146

Client: HollyFrontier Navajo Refining LLC	TRC Project #: 403125.0000.0000
Site: Artesia Refinery	Start Date: 9/22/2020
Address: 501 E Main St, Artesia NM	Finish Date: 9/23/2020
Project: Downgradient Well Installation	Permit #: RA-12950
Drilling Company: Talon LPE — Drilling Crew: R. Rodriguez & crew	TRC Site Rep.: John O'Neal
Drilling Method: Hollow-Stem Auger	TRC Reviewer: Jason Jayroe
Boring Diameter (in): 7.88 — Boring Depth (ft bgs): 30	Coord. System: NAVD88
Sampling Method: 5-ft Continuous Core Sampler	Northing: 673173.048
Blow Count Method: NA	Easting: 527636.606
Field Screening Parameter: Volatile Organic Compounds	Elevation Datum: NAD 1983
Meter: MiniRAE PID — Units: ppm	Ground Elevation (ft): 3340.34
Well Depth (ft bgs): 30.0 — Well Depth (ft toc): 33.70	Well Elevation (ft): 3343.09
Casing Length (ft): 13.45 — Screen Length (ft): 20.0	Well Measuring Point: Top of casing
Surface Completion: Stick-up casing w/ steel protective cover and concrete pad	Depth to Water (ft toc): 24.08
Well Development: Pump and surge 50 gallons	Date/Time: 9/25/2020

Elevation (ft)	Depth (ft)	Sample: Water Level	Sample: Analytical	Sample: Field Screening (PID)	Lithology	Lithologic Description
3340	0			0.0		ML: Silt (white/tan), unconsolidated, dry, no odor, no staining.
				0.1		
				0.0		
				0.1		Trace caliche nodules (white) at 4 feet bgs.
3335	5			0.0		CL: Silty clay (light red), trace fine sand (white), medium to high stiffness, low plasticity, dry, trace to some caliche deposits, caliche content and stiffness decreases with depth, no odor, no staining.
				0.0		
				0.2		No recovery from 7.5 to 10 feet bgs.
				NR		
				NR		
3330	10			NR		Slightly moist at 10 feet bgs.
				NR		
				NR		
				0.5		
				0.4		
3325	15			0.1		CL: Silty clay (red/brown), few fine sand, medium stiffness, medium plasticity, moist, no odor, no staining.

Well Construction Diagram



BORING LOG and WELL CONSTRUCTION

MW-146

Client: HollyFrontier Navajo Refining LLC	Site: Artesia Refinery	Page 2 of 2

Elevation (ft)	Depth (ft)	Water Level	Sample Analytical	Field Screening (PID)	Lithology	Lithologic Description	Well Construction Diagram
				NR			
				1.1			
				0.4			8/16 Grade Silica Sand
				0.3		Caliche rock fragments at 19 feet bgs, very moist, no odor, no staining.	
3320	20			0.0		CL: Sandy silty clay (tan/light brown), few fine sand, medium stiffness, low plasticity, moist, no odor, no staining.	
						Wet seam at 22.0 - 22.25 feet bgs.	
							2-inch Sch. 40 PVC 0.010" Slotted Screen
3315	25					CL: Clay with silt (brown), medium stiffness, low plasticity, moist, no odor, no staining.	
						CL: Sandy silty clay (tan/white), medium plasticity, very moist, no odor, no staining.	
						No recovery from 27 to 29 feet bgs.	
						GC: Gravel seam (light grey).	
3310	30					CL: Silty clay (light grey), few fine sand, low plasticity, wet, no odor, no staining.	2-inch Sch. 40 PVC Endcap, 0.25 feet
						THIS WELL DIAGRAM SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT	
	35						

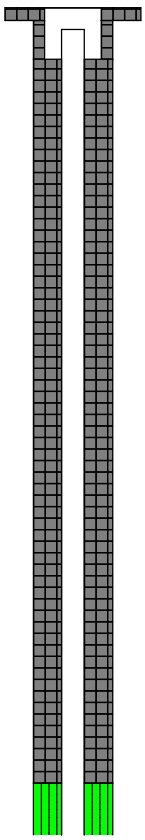
TRC BORING LOG and WELL CONSTRUCTION

MW-147

Client: HollyFrontier Navajo Refining LLC	TRC Project #: 403125.0000.0000
Site: Artesia Refinery	Start Date: 9/24/2020
Address: 501 E Main St, Artesia NM	Finish Date: 9/24/2020
Project: Downgradient Well Installation	Permit #: RA-12950
Drilling Company: Talon LPE — Drilling Crew: R. Rodriguez & crew	TRC Site Rep.: John O'Neal
Drilling Method: Hollow-Stem Auger	TRC Reviewer: Jason Jayroe
Boring Diameter (in): 7.88 — Boring Depth (ft bgs): 40.0	Coord. System: NAVD88
Sampling Method: 5-ft Continuous Core Sampler	Northing: 671265.079
Blow Count Method: NA	Easting: 530212.282
Field Screening Parameter: Volatile Organic Compounds	Elevation Datum: NAD 1983
Meter: MiniRAE PID — Units: ppm	Ground Elevation (ft): 3339.85
Well Depth (ft bgs): 40.0 — Well Depth (ft toc): 39.83 (HMI)	Well Elevation (ft): 3339.48
Casing Length (ft): 19.58 — Screen Length (ft): 20.0	Well Measuring Point: Top of casing
Surface Completion: Flush mount steel cover with concrete pad	Depth to Water (ft toc): 30.73
Well Development: Pump and surge 50 gallons	Date/Time: 9/25/2020

Elevation (ft)	Depth (ft)	Sample: Water Level	Sample: Analytical	Sample: Field Screening (PID)	Lithology	Lithologic Description
3340	0			0.0		GC-CL: Road fill material - Gravel and silty clay (brown), medium stiffness, low plasticity, no odor, no staining.
				0.0		
				0.0		
				0.2		ML: Silty (light brown), trace caliche nodules, shale < 1.0 mm, unconsolidated, no odor, no staining.
3335	5			0.0		No recovery from 5 to 8 feet bgs.
				NR		
				NR		
				0.0		
				0.5		CL: Silty clay (brown), trace fine sand, trace gravel, medium stiff, medium plasticity, slightly moist, no odor, no staining.
				0.9		
3330	10					ML: Silt (white), friable, dry, trace gravel, no odor, no staining.
				NR		
				NR		Mottled with light brown caliche at 12.5 feet bgs, few gravel.
				1.4		
				1.3		
3325	15			3.0		CL: Sandy clay (light grey), medium stiffness, low plasticity, dry to slightly moist, no odor, no staining.

Well Construction Diagram

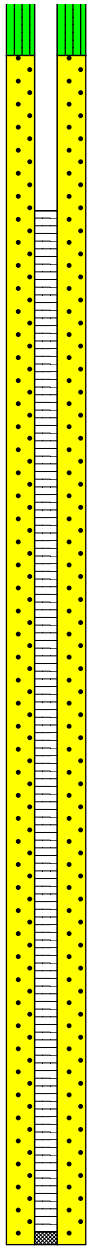


BORING LOG and WELL CONSTRUCTION

MW-147

Client: HollyFrontier Navajo Refining LLC | Site: Artesia Refinery | Page 2 of 2

Elevation (ft)	Depth (ft)	Water Level	Sample Analytical	Field Screening (PID)	Lithologic Description
				NR	
				NR	SP: Fine sand (tan/white), poorly graded, unconsolidated, dry, no odor, no staining.
				0.9	
				0.8	
				1.2	SM: Silty sand (light grey), medium dense, friable, dry, no odor, no staining.
3320	20			NR	No recovery from 20 to 22.5 feet bgs.
				NR	
				0.7	CL: Silty clay (white/tan), few caliche nodules, medium stiffness, low plasticity, no odor, no staining.
				0.8	Few fine sand (grey) at 24.5 feet bgs.
3315	25			0.6	No recovery from 25 to 27 feet bgs.
				NR	
				0.4	CL: Clay (olive), few silt, medium stiffness, medium plasticity, slightly moist, no odor, no staining.
				0.6	Few fine sand at 28 feet bgs.
3310	30			0.3	SC: Fine silty sand, moist, no odor, no staining.
					CL: Clay (red brown), few silt, medium stiffness, medium plasticity, slightly moist, no odor, no staining.
					SP: Fine sand (tan), poorly graded, unconsolidated, wet at 31.5 feet bgs, no odor, no staining.
3305	35				
					CL: Silty clay (light red/brown), few gravel, medium stiffness, low plasticity, dry, weathered, no odor, no staining.
3300	40				THIS WELL DIAGRAM SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT
3295	45				



Well Construction Diagram

- 3/8-inch Hydrated Bentonite Chips
- 2-inch Sch. 40 PVC Riser Pipe
- 8/16 Grade Silica Sand
- 2-inch Sch. 40 PVC 0.010" Slotted Screen
- 2-inch Sch. 40 PVC Endcap, 0.25 feet

TRC BORING LOG and WELL CONSTRUCTION

MW-148

Client: HollyFrontier Navajo Refining LLC	TRC Project #: 403125.0000.0000
Site: Artesia Refinery	Start Date: 9/24/2020
Address: 501 E Main St, Artesia NM	Finish Date: 9/24/2020
Project: Downgradient Well Installation	Permit #: RA-12950
Drilling Company: Talon LPE — Drilling Crew: R. Rodriguez & crew	TRC Site Rep.: John O'Neal
Drilling Method: Hollow-Stem Auger	TRC Reviewer: Jason Jayroe
Boring Diameter (in): 7.88 — Boring Depth (ft bgs): 40.0	Coord. System: NAVD88
Sampling Method: 5-ft Continuous Core Sampler	Northing: 670534.369
Blow Count Method: NA	Easting: 530218.563
Field Screening Parameter: Volatile Organic Compounds	Elevation Datum: NAD 1983
Meter: MiniRAE PID — Units: ppm	Ground Elevation (ft): 3342.79
Well Depth (ft bgs): 40.0 — Well Depth (ft toc): 40.25	Well Elevation (ft): 3342.59
Casing Length (ft): 20.0 — Screen Length (ft): 20.0	Well Measuring Point: Top of casing
Surface Completion: Flush mount steel cover with concrete pad	Depth to Water (ft toc): 34.80
Well Development: Pump and surge 30 gallons	Date/Time: 9/25/2020

Elevation (ft)	Depth (ft)	Sample: Water Level	Sample: Analytical	Field Screening (PID)	Lithology	Lithologic Description	Well Construction Diagram
3345							
	0						Flush Mount Steel Cover with Concrete Pad
				0.2		GC-CL: Road fill material - Gravel and silty clay (brown), medium stiffness, low plasticity, no odor, no staining.	
				0.4			
3340				1.9		CL: Clayey silt (light brown), dry, no odor, no staining.	
				0.7			
	5			0.4		ML: Silt (white), friable, dry to slightly moist, no odor, no staining.	2-inch Sch. 40 PVC Riser Pipe
				NR			
				0.6			
3335				0.8			
				0.3		Some caliche near 8 feet bgs.	Portand Cement
				0.8		CL: Silty clay (brown), few caliche (white), medium stiffness, low plasticity, caliche content increases with depth, no odor, no staining.	
	10						
				NR			
				NR			
3330				0.6			
				0.6		GC: Gravel layer with some caliche.	
	15			0.5		No recovery from 15 to 18 feet bgs.	3/8-inch Hydrated Bentonite Chips

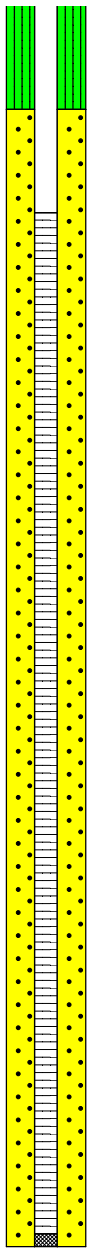
BORING LOG and WELL CONSTRUCTION

MW-148

Client: HollyFrontier Navajo Refining LLC | Site: Artesia Refinery | Page 2 of 2

Elevation (ft)	Depth (ft)	Sample / Water Level / Analytical	Field Screening (PID)	Lithology	Lithologic Description
			NR		
			NR		CL: Silty clay, few very fine sand (olive), medium stiffness, low plasticity, moist, no odor, no staining.
3325			NR		
			0.4		
			0.9		CL: Silty clay (light brown), abundant caliche (white), medium stiffness, low plasticity, dry, no odor, no staining.
	20		NR		No recovery from 20 to 22.5 feet bgs.
3320			0.4		SP: Fine sand (light brown), poorly graded, unconsolidated, slightly moist, no odor, no staining.
			0.4		
			0.4		CL: Sandy clay (light brown) medium stiffness, low plasticity, slightly moist, no odor, no staining.
	25		0.5		
			NR		No recovery from 25 to 27.5 feet bgs.
			NR		
3315			0.6		CL: Sandy clay (light brown), some caliche, medium stiffness, low plasticity, slightly moist, no odor, no staining.
			0.6		GC: Caliche gravel (white), wet, no odor, no staining.
	30		0.6		CL: Clay (red/brown), few silt, low plasticity, dry, no odor, no staining.
					CL: Silty clay (greyish brown), few fine sand, wet, no odor, no staining.
3310					CL: Clay (brown/green), trace sand, medium stiffness, medium plasticity, moist, no odor, no staining.
					CL: Sandy clay, wet, no odor, no staining.
	35				SP: Fine sand (light brown), poorly graded, medium dense, wet, no odor, no staining.
3305					
	40				THIS WELL DIAGRAM SHOULD NOT BE USED SEPARATE FROM THE ORIGINAL REPORT
3300					
	45				

Well Construction Diagram



- 3/8-inch Hydrated Bentonite Chips
- 2-inch Sch. 40 PVC Riser Pipe
- 8/16 Grade Silica Sand
- 2-inch Sch. 40 PVC 0.010" Slotted Screen
- 2-inch Sch. 40 PVC Endcap, 0.25 feet

wood.
17325 Park Row
Houston, TX 77084
(832) 809-8000

WELL NUMBER MW-62R

CLIENT HollyFrontier Navajo Refining LLC
PROJECT NAME Artesia, New Mexico Refinery
PROJECT NUMBER 6703200049
PROJECT LOCATION Artesia, New Mexico
DATE STARTED 9/1/20 **COMPLETED** 9/3/20
TOC ELEVATION 3368.5254 ft **HOLE SIZE** 8"
DRILLING CONTRACTOR Tolunay-Wong Engineers
GROUND WATER LEVELS:
DRILLING METHOD Hand Auger 0-5ft bgs; DPT 5-25ft bgs; HSA - well install
AT TIME OF DRILLING ---
LOGGED BY E. Sosa **CHECKED BY**
AT END OF DRILLING ---
NOTES Northing: 672656.0151, Easting: 522699.1932
AFTER DRILLING 16.33 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						Casing Type: 2" PVC
			SC		(SC) CLAYEY SAND with some 0.25-1" subangular to subrounded gravel, medium plasticity, brown, dry, no staining, no odor	0 - 1ft bgs: Cement Grout 1 - 3ft bgs: Bentonite Seal
					3.0	
			CL		(CL) SANDY CLAY, medium plasticity, dark brown, dry, no staining, no odor, carbonate nodules present	
5		0				
		0			Medium to high plasticity, brown, moist	
		2			Staining present, slight odor	
		6				
		30				
10		5			Moderate odor	
		25				
		110				
		1365			Heavy odor	
		1381				3 - 25ft bgs: Filter Pack 4.5 - 24.5ft bgs: Well Screen
15		350				
	GB MW-62R-16	1405			Moderate odor	
		1027				
		275				
		50				
20		32				
		110				
		400				
		160				
					24.0	
25	GB MW-62R-25	20	CH		(CH) CLAY, medium to high plasticity, dark gray, moist, staining, slight odor	
					25.0	

Bottom of borehole at 25.0 feet.

Acronyms/Abbreviations
" - inch/inches
bgs - below ground surface
DPT - direct push technology
ft - foot/feet
GB - grab sample
HSA - hollow stem auger
PID - photoionization detector
ppm - parts per million
U.S.C.S - United Soil Classification System

GENERAL BH / TP / WELL - GINT STD US.GDT - 2/10/21 15:31 - I:\CLIENT\HOLLYFRONTIER\ARTESIANM\6703200049 - HF NESTED WELL IMPLEMENTATION\9.0 DRAFT REPORTS\WELL LOGS\NAVAJO.GPJ

wood.
17325 Park Row
Houston, TX 77084
(832) 809-8000

WELL NUMBER MW-137A

CLIENT HollyFrontier Navajo Refining LLC
PROJECT NAME Artesia, New Mexico Refinery
PROJECT NUMBER 6703200049
PROJECT LOCATION Artesia, New Mexico
DATE STARTED 9/2/20 **COMPLETED** 9/3/20
TOC ELEVATION 3363.4542 ft **HOLE SIZE** 8"
DRILLING CONTRACTOR Tolunay-Wong Engineers
GROUND WATER LEVELS:
DRILLING METHOD Hand Auger 0-5ft bgs; DPT 5-15ft bgs; HSA - well install
AT TIME OF DRILLING ---
LOGGED BY E. Sosa **CHECKED BY**
AT END OF DRILLING ---
NOTES Northing: 672872.2025, Easting: 523039.4696
AFTER DRILLING --- Dry

DEPTH (ft)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						Casing Type: 2" PVC
		4	SC		(SC) CLAYEY SAND, low plasticity, brown, dry, no staining, slight odor, carbonate nodules present	0 - 1ft bgs: Cement Grout
		6		1.0		
		10	CL		(CL) SANDY CLAY, medium plasticity, dark gray, dry, dark staining, moderate odor	1 - 3ft bgs: Bentonite Seal
		60			Low to medium plasticity, light gray, stained, moderate odor	
		50			Medium plasticity, light gray-green, moist, heavy staining, heavy odor, carbonate nodules present	
5		5000+				
		5000+				
		5000+				
		5000+				
		5000+				3 - 15.45ft bgs: Filter Pack
10		5000+			Low to medium plasticity, light gray, some caliche present	5 - 15ft bgs: Well Screen
		5000+				
		5000+				
	GB MW-137R-14	5000+				
15	GB MW-137R-15	5000+			Medium to high plasticity, light gray-green	
				15.5		

Bottom of borehole at 15.5 feet.

Acronyms/Abbreviations
" - inch/inches
bgs - below ground surface
DPT - direct push technology
ft - foot/feet
GB - grab sample
HSA - hollow stem auger
PID - photoionization detector
ppm - parts per million
U.S.C.S - United Soil Classification System

GENERAL BH / TP / WELL - GINT STD US.GDT - 2/10/21 15:31 - I:\CLIENT\HOLLYFRONTIER\ARTESIANM\6703200049 - HF NESTED WELL IMPLEMENTATION\9.0 DRAFT REPORTS\WELL LOGS\NAVAJO.GPJ

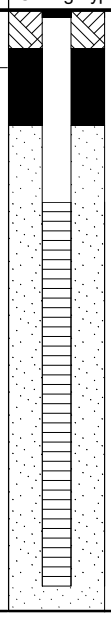
wood.
17325 Park Row
Houston, TX 77084
(832) 809-8000

WELL NUMBER MW-138A

CLIENT HollyFrontier Navajo Refining LLC
PROJECT NAME Artesia, New Mexico Refinery
PROJECT NUMBER 6703200049
PROJECT LOCATION Artesia, New Mexico
DATE STARTED 9/2/20 **COMPLETED** 9/3/20
TOC ELEVATION 3364.5557 ft **HOLE SIZE** 8"
DRILLING CONTRACTOR Tolunay-Wong Engineers
GROUND WATER LEVELS:
DRILLING METHOD Hand Auger 0-5ft bgs; DPT 5-15ft bgs; HSA - well install
AT TIME OF DRILLING ---
LOGGED BY E. Sosa **CHECKED BY**
AT END OF DRILLING ---
NOTES Northing: 672924.4891, Easting: 522916.0881
AFTER DRILLING --- Dry

DEPTH (ft)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0		1	SC		(SC) CLAYEY SAND with trace 0.5-1" subangular to subrounded gravel, low to medium plasticity, brown, dry, no staining, no odor
		2			
1.5		6	CL		(CL) SANDY CLAY, low to medium plasticity, black-gray, dry, heavy staining, light odor
		11			Whitish gray, stained, odor, some caliche present
		10			
5		40			Medium to high plasticity, grayish greenish white, carbonate nodules present
		230			
		384			
		464			
		1740			
10		3701			
		1983			
		1309			
	GB MW-138R-14	4903			
	GB MW-138R-15	2205			Low to medium plasticity, brown, no carbonate nodules
15					
15.7					

Bottom of borehole at 15.7 feet.



Acronyms/Abbreviations
" - inch/inches
bgs - below ground surface
DPT - direct push technology
ft - foot/feet
GB - grab sample
HSA - hollow stem auger
PID - photoionization detector
ppm - parts per million
U.S.C.S - United Soil Classification System

GENERAL BH / TP / WELL - GINT STD US.GDT - 2/10/21 15:31 - I:\CLIENT\HOLLYFRONTIER\ARTESIANM\6703200049 - HF NESTED WELL IMPLEMENTATION\9.0 DRAFT REPORTS\WELL LOGS\NAVAJO.GPJ

Appendix B

Released to Imaging: 11/22/2022 8:37:39 AM

Received by OCD: 11/22/2022 9:24:38 AM

S. Department of Commerce
ational Oceanic & Atmospheric Administration
ational Environmental Satellite, Data, and Information Service
urrent Location: Elev: 3366 ft. Lat: 32.7547° N Lon: -104.3835° W
ation: **ARTESIA 6 S, NM US USC00290600**

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 01/28/2021

National Centers for Environmental Informati
151 Patton Aven
Asheville, North Carolina 288

Observation Time Temperature: 0730 Observation Time Precipitation: 07

Year	Month	Day	Temperature (F) 24 Hrs. Ending at Observation Time Max.	Temperature (F) 24 Hrs. Ending at Observation Time Min.	Temperature (F) At Obs.	Precipitation 24 Hour Amounts Ending at Observation Time Rain, Melted Snow, Etc. (in)	Precipitation 24 Hour Amounts Ending at Observation Time Flag	Precipitation 24 Hour Amounts Ending at Observation Time Snow, Ice Pellets, Hail (in)	Precipitation 24 Hour Amounts Ending at Observation Time Flag	Precipitation At Obs. Time Snow, Ice Pellets, Hail, Ice on Ground (in)	Evaporation 24 Hour Wind Movement (mi)	Evaporation Amount of Evap. (in)	Soil Temperature (F) 4 in. Depth Ground Cover (see *)	Soil Temperature (F) 4 in. Depth Max.	Soil Temperature (F) 4 in. Depth Min.	Soil Temperature (F) 8 in. Depth Ground Cover (see *)	Soil Temperature (F) 8 in. Depth Max.	Soil Temperature (F) 8 in. Depth Min.
20	06	01	90	57	64	0.00		0.0		0.0	154.7	0.38	5	72	71			
20	06	02	89	61	66	0.00		0.0		0.0	180.8	0.38	5	72	72			
20	06	03	94	66	72	0.00		0.0		0.0	144.2	0.30	5	73	71			
20	06	04	96	67	74	0.00		0.0		0.0	129.2	0.32	5	75	75			
20	06	05	102	72	74	0.00		0.0		0.0	221.8	0.39	5	75	73			
2020	06	06	103	71	73	0.00		0.0		0.0	313.8	0.51	5	76	75			
2020	06	07	99	68	73	0.00		0.0		0.0	387.7	0.64	5	76	76			
2020	06	08	100	62	69	0.00		0.0		0.0	210.0	0.48	5	76	75			
2020	06	09	95	56	62	0.00		0.0		0.0	270.9	0.63	5	76	75			
2020	06	10	89	46	60	0.00		0.0		0.0	92.0	0.33	5	75	74			
2020	06	11	92	60	69	0.00		0.0		0.0	193.9	0.42	5	75	74			
2020	06	12	95	64	70	0.02		0.0		0.0	203.8	0.16	5	76	74			
2020	06	13	96	61	68	0.00		0.0		0.0	206.9	0.49	5	75	74			
2020	06	14	97	65	67	0.00		0.0		0.0	275.9	0.67	5	75	75			
2020	06	15	96	61	68	0.00		0.0		0.0	243.0	0.47	5	75	73			
2020	06	16	94	58	68	0.00		0.0		0.0	200.7	0.38	5	74	73			
2020	06	17	94	66	71	0.00		0.0		0.0	216.9	0.30	5	75	73			
2020	06	18	98	63	66	0.00		0.0		0.0	216.2	0.57	5	75	73			
2020	06	19	100	63	70	0.00		0.0		0.0	133.0	0.41	5	76	74			
2020	06	20	100	64	69	0.00		0.0		0.0	157.8	0.45	5	76	76			
2020	06	21	96	58	65	0.00		0.0		0.0	115.0	0.34	5	77	76			
2020	06	22	106	63	76	0.00		0.0		0.0	113.7	0.33	5	76	76			
2020	06	23	103	70	73	0.00		0.0		0.0	157.2	0.45	5	77	76			
2020	06	24	96	62	66	0.24		0.0		0.0	115.0	0.35	5	77	76			
2020	06	25	90	62	67	0.00		0.0		0.0	172.7	0.30	5	77	76			
2020	06	26	97	63	65	0.00		0.0		0.0	198.2	0.54	5	76	75			
2020	06	27	100	65	70	0.02		0.0		0.0	183.9	0.35	5	76	75			
2020	06	28	98	66	71	0.00		0.0		0.0	187.0	0.37	5	75	75			
2020	06	29	99	67	75	0.00		0.0		0.0	175.2	0.31	5	75	75			
2020	06	30	97	69	74	0.00		0.0		0.0	267.8	0.61	5	76	75			
		Summary	97	63		0.28		0.0										

Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests. "At Obs." = Temperature at time of observation

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

HMI Groundwater

Hydrologic Monitoring
1654 W. Sam Houston Pkwy. N.
Houston, Texas 77043

Phone 713.464.5206
Fax 713.464.5207

June 23, 2020

Ms. Julie Speer, P.G.
Project Manager
TRC
505 East Huntland Drive, Suite 250
Austin, Texas 78752

Subject: June 2020 (Spring) Groundwater Monitoring Event
Sitewide Gauging – June 15-16, 2020
Groundwater Sampling – June 15-19, 2020
Navajo Refining Company, Artesia, New Mexico

Dear Ms. Speer:

This document summarizes groundwater monitoring field activities conducted by Hydrologic Monitoring, LLC (HMI) on behalf of TRC at the Navajo Refining Company, Artesia Refinery, Artesia, New Mexico.

Contents

Field Activities Narrative
Table 1: (Gauging Data, GW Field Parameters, Well Inspections, & Analytical Program)
Groundwater Sampling SOP Memo
Daily Job Hazard Analysis (JHA) forms
Groundwater Sampling Forms and Field Instrument Calibration Log
(three (3) emails - forms in order of field-strategy shown in Table 1)
Chain-of-Custody Forms (one email)

Field Activities Narrative

1. Historically conducted in April, the 1H20 event was delayed until June, due to COVID 19 concerns. HMI conducted the *June 2020 (Spring) Groundwater Monitoring Event* (i.e., "SA" and "A" designations, only, in Table 1). Sitewide gauging was conducted June 15-16**,** 2020. Groundwater sampling (142 wells sampled) was conducted June 15-19**,** 2020.

2. Groundwater sampling was conducted in accordance with the Site Sampling and Analysis Plan, EPA guidance, and the attached Memorandum - Low-Flow Groundwater Monitoring Standard Operating Procedures, Navajo Refining Co. - Artesia, New Mexico. Per regulatory request, if measured LNAPL thickness was *less than* 0.03 feet, in any well scheduled for groundwater sampling, LNAPL was removed, and the well was sampled. If LNAPL thickness was equal to, or greater than 0.03 feet, in any well scheduled for sampling, the well was not sampled. Gauging data, groundwater field parameters, and well inspection information is summarized in Table 1. Samples were shipped overnight FedEx, to Pace National, Mt. Juliet, TN. The groundwater sampling process is documented on the attached groundwater sampling forms.

3. Field QA/QC Sampling (per Refinery Area):

   <u>Evaporation Ponds</u>
   Duplicates:
   Dup-EP-01 at MW-7A
   Dup-EP-02 at MW-22A
   Dup-EP-03 at MW-3
   Equipment Blanks:
   EB-EP-01 collected over decontaminated gauging probe after sampling at MW-74
   EB-EP-02 collected over decontaminated gauging probe after sampling at MW-124
   EB-EP-03 collected over decontaminated gauging probe after sampling at MW-5A
   EB-EP-04 collected over decontaminated gauging probe after sampling at MW-79
   Trip Blank-EP-01 (…this intended ID was inadvertently labeled as Trip Blank-EP-04)
   Trip Blank-EP-02
   Trip Blank-EP-03
   Trip Blank-EP-04

   <u>NCL</u>
   Duplicate:
   Dup-NCL-01 at NCL-49
   Equipment Blank:
   EB-NCL-01 collected over decontaminated gauging probe after sampling at NCL-32
   Trip Blank-NCL-01

   <u>TMD</u>
   Trip Blank-TMD-01

TEL
Duplicate:
Dup-TEL-01 at TEL-4
Equipment Blank:
EB-TEL-01 collected over decontaminated gauging probe after sampling at TEL-2
Trip Blank-TEL-01

REST ("rest" of the site)
Duplicates:
Dup-REST-01 at MW-113
Dup-REST-02 at MW-104
Dup-REST-03 at MW-134
Dup-REST-04 at MW-60
Dup-REST-05 at KWB-12B
Equipment Blanks:
EB-REST-01 collected over decontaminated gauging probe after sampling at MW-113
EB-REST-02 collected over decontaminated gauging probe after sampling at MW-104
EB-REST-03 collected over decontaminated gauging probe after sampling at MW-134
EB-REST-04 collected over decontaminated gauging probe after sampling at MW-60
EB-REST-05 collected over decontaminated gauging probe after sampling at KWB-12B
Trip Blank-REST-01
Trip Blank-REST-02
Trip Blank-REST-03
Trip Blank-REST-04

4. Notes:

1H20: Per TRC, Pace chain-of-custodies, reference PO # 150726

TRC notes from March 2020:
HMI's daily JHA forms to be included in deliverables package.
Email TRC "Estimated Field Hours" table, pre-event; follow with "Actual Field Hours" table, post-event.
MW-101 recompleted at-grade (due to inside-plant construction) (photo sent to TRC).
MW-129 recompleted at-grade (due to new asphalt loading rack) (photo sent to TRC).
MW-53 (well lost to road construction, was not yet replaced with new well "MW-53R", at 1H20 event).
Irrigation wells may experience upcoming changes, per TRC (TBD, replacements, etc.)
Renewed well-access to the Joy farm property may be upcoming, TBD, per TRC.

Training modules: "24HFNAV HOLLYFRONTIER SITE SPECIFIC ORIENTATION ARTESIA-NM", and an additional "LPS" module – both @ HASC, annually (December-cycle). HMI's DISA 2-yr backgound check/drug/alcohol requirements approved by safety-trailer personnel on 10-3-17 (updated 2019), as reported through HASC system; HMI will maintain its access status.

Per Navajo, purgewater is disposed in the pad sump (inside, then to the left of Main Gate entrance). Alternately, North Bundle Pad sump (fenced area of drums, etc.), notifying FCC control room prior to entrance.
Sitewide well and gate lock combinations: "2-0-1-3" (less often "2-0-0-2").
With suggested telephone notification, FedEx pickup from locked shed (35-25-39 combination) no earlier than approximately 14:00 daily, located across from Artesia Wool Co (access shed-area from "inside" Refinery).
North side of Hwy 82, east of site, gate with cable and combination lock (8810).
POTW bldg, check-in as needed, to borrow a key or get gate unlocked.
HMI borrows Navajo key sets for "Evaporation Ponds" & "TEL" at permitting (return keys upon event completion, each event). Navajo's Mr. Robert Combs, Randy Dade, Richard Orosco, for daily safety review and permit-issuing per team member (typically 8-10 HMI team-members).

Navajo completed well surface completion upgrades in a phased-approach, beginning 2018. HMI's well inspections are documented on respective well gauging and sampling forms. Well inspection items of potential concern (i.e., "Issues") are highlighted in yellow color (see Table 1).

HMI appreciates the opportunity to assist TRC with this project. If you have any questions or would like additional information please feel free to call us at 713.464.5206.

Sincerely,

HYDROLOGIC MONITORING

Scott C. Ude

Scott C. Ude, P.G.

STATE OF TEXAS
SCOTT C. UDE
GEOLOGY
353
LICENSED
PROFESSIONAL GEOSCIENTIST

The seal appearing on this document was authorized by Scott C. Ude, P.G. 353 on June 23, 2020.

Attachments

cc: Dana Helbert, P.G., TRC-Austin

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
MW-6A	Monitoring	MDB	1	1	EP	16-Jun	1030	NP	11.64	0.00	19.04	16-Jun	1055	7.57	21.7	4,380	1.6	-139.7	6.5	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-6B	Monitoring	MDB		2	EP	16-Jun	1115	NP	11.47	0.00	52.28										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-85	Monitoring	MDB		3	EP	16-Jun	1810	8.82	8.95	0.13	20.34			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-86	Monitoring	MDB	2	4	EP	16-Jun	1800	NP	8.30	0.00	19.21	17-Jun	1415	6.96	23.6	7,110	1.2	-366.1	51.7	Clr, yellow tint, black particles	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]			SA [d]
MW-120	Monitoring	MDB	3	5	EP	16-Jun	1120	NP	10.67	0.00	28.00	16-Jun	1145	7.41	22.5	7,990	1.4	-148.5	6.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-121	Monitoring	MDB	4	6	EP	16-Jun	1205	NP	9.83	0.00	27.31	16-Jun	1230	7.47	21.3	5,640	1.4	-33.6	8.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-84	Monitoring	MDB	5	7	EP	16-Jun	1755	NP	9.49	0.00	20.56	17-Jun	1330	7.16	22.1	10,140	1.4	-117.6	7.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-122	Monitoring	MDB	6	8	EP	16-Jun	1730	NP	9.36	0.00	23.32	17-Jun	940	7.24	19.6	8,290	1.4	-83.6	52.6	Clr, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-81	Monitoring	MDB	7	9	EP	16-Jun	1735	NP	9.25	0.00	18.62	17-Jun	1025	7.26	20.8	5,990	1.5	38.3	5.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-80	Monitoring	MDB	8	10	EP	16-Jun	1740	NP	7.39	0.00	19.69	17-Jun	1110	7.23	19.3	6,070	1.4	13.0	6.8	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-79	Monitoring	MDB	9	11	EP	16-Jun	1745	NP	9.18	0.00	19.24	17-Jun	1155	7.10	20.0	9,070	1.5	-57.9	4.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-82	Monitoring	MDB	10	12	EP	16-Jun	1750	NP	8.51	0.00	20.02	17-Jun	1245	7.36	22.2	7,280	1.4	-150.7	3.5	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-74	Monitoring	MDB	11	13	EP	16-Jun	1250	NP	8.60	0.00	20.19	16-Jun	1315	7.19	20.6	10,430	1.3	65.5	4.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-73	Monitoring	MDB	12	14	EP	16-Jun	1345	NP	9.15	0.00	19.60	16-Jun	1420	7.33	20.4	11,860	1.3	-75.7	12.9	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-2A	Monitoring	MDB	13	15	EP	16-Jun	1715	NP	8.02	0.00	17.30	17-Jun	855	7.44	20.3	5,040	1.4	-124.9	5.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-2B	Monitoring	MDB		16	EP	16-Jun	1720	NP	9.95	0.00	52.00			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
MW-72	Monitoring	MDB	14	17	EP	16-Jun	1625	NP	6.65	0.00	13.93	16-Jun	1650	6.96	20.8	11,370	1.4	20.6	4.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
OCD-6	Monitoring	MDB	15	18	EP	16-Jun	1540	NP	7.51	0.00	26.69	16-Jun	1605	7.07	19.7	12,910	1.3	-78.4	4.6	Clr, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
OCD-7AR	Monitoring	MDB	16	19	EP	16-Jun	1445	NP	6.35	0.00	21.28	16-Jun	1510	7.14	22.3	12,950	1.3	-145.1	8.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
OCD-7B	Monitoring	MDB		20	EP	16-Jun	1525	NP	6.96	0.00	56.85										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
OCD-7C	Monitoring	MDB		21	EP	16-Jun	1530	NP	7.99	0.00	71.95			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
RW-#15C [e]	Recovery [d]	MDB		22	REST	16-Jun	940	18.71	18.99	0.28	22.30			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-48	Monitoring	MDB		23	REST	16-Jun	935	20.79	20.82	0.03	32.00			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Issue	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-130	Monitoring	MDB/BRH	17	24	REST	16-Jun	930	NP	22.49	0.00	45.00	17-Jun	1410	6.67	23.7	2,420	1.6	-32.8	8.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
KWB-4	Monitoring	MDB		25	REST	16-Jun	950	26.39	28.10	1.71	41.75			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
RW-19	Recovery [d]	MDB		26	REST	16-Jun	1000	27.25	27.30	0.05	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-76	Monitoring	SCD	18	27	EP	16-Jun	1625	NP	10.31	0.00	20.33	17-Jun	1325	6.81	22.8	7,170	1.8	-202.5	6.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-77	Monitoring	SCD	19	28	EP	16-Jun	1630	NP	8.60	0.00	20.52	17-Jun	1410	6.85	23.1	7,980	1.8	-177.4	5.5	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-78	Monitoring	SCD	20	29	EP	16-Jun	1635	NP	8.69	0.00	19.57	17-Jun	1455	7.04	21.1	4,410	1.8	-65.1	4.7	Clear, gold tint	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-75	Monitoring	SCD	21	30	EP	16-Jun	1640	NP	8.71	0.00	23.74	17-Jun	1540	7.24	21.5	7,340	1.1	-166.8	8.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
MW-83	Monitoring	SCD	22	31	EP	16-Jun	1645	NP	8.56	0.00	19.91	17-Jun	1240	6.81	22.7	6,540	1.5	-49.2	7.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-3	Monitoring	SCD	23	32	EP	16-Jun	1650	NP	10.58	0.00	22.10	17-Jun	1140	7.01	21.7	6,870	1.8	-17.5	6.0	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-88	Monitoring	SCD	24	33	EP	16-Jun	1700	NP	9.00	0.00	20.31	16-Jun	1725	7.07	22.0	7,160	1.3	-144.0	6.8	Clr, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A
MW-22A	Monitoring	SCD	25	34	EP	16-Jun	1745	NP	8.12	0.00	22.65	17-Jun	1025	6.91	20.1	16,020	1.8	-34.8	6.0	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-22B	Monitoring	SCD		35	EP	16-Jun	1748	NP	7.72	0.00	54.66										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-10	Monitoring	SCD	26	36	EP	16-Jun	1751	NP	5.80	0.00	18.45	17-Jun	940	6.91	20.2	6,800	2.0	-111.9	5.4	Clr, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-123	Monitoring	SCD	27	37	EP	16-Jun	1755	NP	6.34	0.00	25.71	17-Jun	855	6.91	19.0	7,250	1.7	-121.5	5.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-4A	Monitoring	SCD	28	38	EP	16-Jun	1530	NP	10.82	0.00	16.55	16-Jun	1555	7.06	22.5	5,690	2.0	-175.2	7.0	Clr, black particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-4B	Monitoring	SCD		39	EP	16-Jun	1615	NP	10.60	0.00	72.37										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-5A	Monitoring	SCD	29	40	EP	16-Jun	1425	NP	8.55	0.00	20.15	16-Jun	1450	7.08	22.1	11,790	1.7	-117.5	6.9	Clr, black particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-5B	Monitoring	SCD		41	EP	16-Jun	1515	NP	8.08	0.00	53.54										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-5C	Monitoring	SCD		42	EP	16-Jun	1520	NP	8.25	0.00	71.64										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-7A	Monitoring	SCD	30	43	EP	16-Jun	1320	NP	8.74	0.00	18.65	16-Jun	1345	7.23	21.0	9,870	1.3	-113.9	7.5	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-7B	Monitoring	SCD		44	EP	16-Jun	1415	NP	8.52	0.00	52.56										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
OCD-8A	Monitoring	SCD	31	45	EP	16-Jun	1225	NP	8.85	0.00	20.74	16-Jun	1250	7.01	21.4	18,540	1.8	-146.9	6.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
OCD-8B	Monitoring	SCD		46	EP	16-Jun	1310	NP	7.98	0.00	56.65										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
KWB-P4	Monitoring	BRH		47	REST						30.26			DO NOT ADDRESS IN 1H20, per Navajo												B	B	B	-	B	-	-	-	-	-			-
MW-25	Monitoring	BRH	32	48	TMD	16-Jun	1240	NP	12.82	0.00	28.18	17-Jun	910	7.30	18.8	3,530	1.6	34.4	3.8	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
NP-8	Monitoring	BRH		49	TMD	16-Jun	1245	NP	11.15	0.00	>14.95			Not in sampling program; Navajo added PVC riser in 1H18							Yes	Issue	Yes	Yes		SA	Not in sampling program											
MW-1R	Monitoring	BRH	33	50	EP	16-Jun	1250	NP	9.04	0.00	20.63	17-Jun	1000	7.25	18.2	5,420	1.5	-116.9	3.2	Clear	Yes	Issue	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-15	Monitoring	BRH	34	51	EP	16-Jun	1255	NP	9.63	0.00	21.70	17-Jun	1045	7.34	19.3	4,270	1.6	25.8	4.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
OCD-1R	Monitoring	BRH/OJD	35	52	EP	16-Jun	1305	NP	9.50	0.00	23.74	17-Jun	1415	7.08	27.3	6,070	1.3	-28.5	7.5	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
OCD-2A	Monitoring	BRH/OJD	36	53	EP	16-Jun	1310	NP	9.16	0.00	27.56	17-Jun	1325	7.10	25.3	6,810	2.1	-19.5	5.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A
OCD-2B	Monitoring	BRH		54	EP	16-Jun	1315	NP	10.50	0.00	50.38			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
OCD-3	Monitoring	BRH/OJD	37	55	EP	16-Jun	1340	NP	9.78	0.00	25.20	17-Jun	1145	7.35	26.3	3,810	2.1	-11.7	5.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A
OCD-4	Monitoring	BRH/OJD	38	56	EP	16-Jun	1345	NP	9.35	0.00	25.41	17-Jun	1055	7.12	25.4	13,120	2.4	-19.5	7.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A
MW-11A	Monitoring	BRH/OJD	39	57	EP	16-Jun	1325	NP	8.18	0.00	22.01	17-Jun	1235	6.59	26.7	16,190	2.2	-38.5	2.8	Clr, orange particles	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	SA	SA			SA
MW-11B	Monitoring	BRH		58	EP	16-Jun	1330	NP	7.98	0.00	47.30										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
OCD-5	Monitoring	BRH/OJD	40	59	EP	16-Jun	1350	NP	7.61	0.00	25.41	17-Jun	1010	6.96	24.7	11,660	2.8	-77.8	37.8	Sl. Cloudy, orange tint	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-87	Monitoring	BRH	41	60	EP	16-Jun	1430	NP	7.99	0.00	20.39	16-Jun	1545	7.19	21.2	11,570	1.1	-50.3	2.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
MW-18A	Monitoring	BRH	42	61	EP	16-Jun	1440	NP	8.41	0.00	22.58	16-Jun	1630	7.15	19.4	15,510	1.1	-189.8	1.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	SA	SA	SA	SA			SA
MW-18B	Monitoring	BRH		62	EP	16-Jun	1445	NP	8.42	0.00	50.59										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
MW-18T	Monitoring	BRH		63	EP	16-Jun	1450	NP	8.53	0.00	50.57			Not in sampling program; Navajo added PVC riser in 1H18							Yes	Yes	Yes	Yes		SA	Not in sampling program											
MW-70	Monitoring	BRH	43	64	EP	16-Jun	1500	NP	8.02	0.00	22.05	16-Jun	1800	7.09	20.5	5,970	1.9	-94.8	8.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	A	A			A
MW-124	Monitoring	BRH	44	65	EP	16-Jun	1510	NP	8.92	0.00	22.00	16-Jun	1710	7.09	18.9	10,240	1.4	-122.9	20.4	Clr, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-52	Monitoring	BRH	45	66	REST	16-Jun	1120	NP	20.83	0.00	34.67	17-Jun	1320	6.97	21.2	2,560	1.4	-202.4	4.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-109	Monitoring	BRH	46	67	REST	16-Jun	1115	NP	18.89	0.00	29.48	17-Jun	1235	7.04	22.6	2,460	0.8	-383.5	5.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-110	Monitoring	BRH	47	68	REST	16-Jun	1110	NP	15.45	0.00	29.74	17-Jun	1150	7.18	21.2	1,701	1.3	-115.8	7.5	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-13	Monitoring	BRH		69	EP	16-Jun	1155	NP	9.12	0.00	21.10			Not in sampling program							Yes	Yes	Yes	Yes		SA	No sampling due to location N. of river											
MW-69	Monitoring	BRH		70	EP	16-Jun	1150	NP	7.79	0.00	22.51			Not in sampling program							Yes	Yes	Yes	Yes		SA	No sampling due to location N. of river											
MW-12	Monitoring	BRH		71	EP	16-Jun	1145	NP	6.52	0.00	17.93			Not in sampling program							Yes	Yes	Yes	Yes		SA	No sampling due to location N. of river											
MW-24	Monitoring	BRH		72	EP	16-Jun	1205	NP	8.61	0.00	23.51			Not in sampling program							Yes	Yes	Issue	Yes		SA	No sampling due to location E. of river											
MW-14	Monitoring	BRH		73	EP	16-Jun	1210	NP	7.28	0.00	>11.81			Not in sampling program							Yes	Issue	Yes	Yes		SA	No sampling due to location N. of river											
RW-12	Recovery [d]				Field E of Refinery			Not in gauging program						Not in sampling program												-	-	-	-	-	-	-	-	-	-			-
RW-12R	Recovery [d]	BTB/RJM	48	74	REST	16-Jun	1540	NP	23.55	0.00	NM	17-Jun	1535	6.84	25.1	2,880	0.8	-289.3	6.9	Clear	Yes	Yes	Yes	Yes		SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-113	Monitoring	BTB/BRH	49	75	REST	16-Jun	1544	NP	23.02	0.00	37.80	17-Jun	1510	6.65	21.2	2,310	1.6	-106.4	3.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
KWB-8	Monitoring	BTB		76	REST	16-Jun	1547	20.80	20.89	0.09	35.80			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]			SA [d]
RW-22	Recovery [d]	BTB		77	REST	16-Jun	1549	24.64	30.33	5.69	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-20A	Recovery [d]	BTB		78	REST	16-Jun	1553	17.52	17.63	0.11	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-20B	Recovery [d]	BTB		79	REST	16-Jun	1557	17.53	17.66	0.13	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-13	Recovery [d]				Field E of Refinery			Not in gauging program						Not in sampling program											Y	-	-	-	-	-	-	-	-	-	-			-
RW-13R	Recovery [d]	BTB		80	REST	16-Jun	1601	22.01	24.21	2.20	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-14	Recovery [d]				Field E of Refinery			Not in gauging program						Not in sampling program											Y	-	-	-	-	-	-	-	-	-	-			-
RW-14R	Recovery [d]	BTB		81	REST	16-Jun	1604	20.47	26.73	6.26	NM			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-133	Monitoring	BTB		82	REST	16-Jun	1607	19.72	20.18	0.46	37.64			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-134	Monitoring	BTB/RJM	50	83	REST	16-Jun	1610	NP	19.18	0.00	32.95	17-Jun	1340	6.88	23.7	4,200	1.9	65.7	2.7	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
RA-4798	Irrigation	BTB	51	84	REST	Not in gauging program						17-Jun	1605	7.21	20.2	2,196	3.9	-58.2	1.1	Clear	NA	NA	NA	Yes		NA	SA	-	-	SA	-	-	-	SA	SA			SA
RA-4196	Irrigation	BTB	52	85	REST	Not in gauging program						17-Jun	1550	7.18	22.6	2,238	3.2	-76.8	1.9	Clear	NA	NA	NA	Yes		NA	SA	-	-	SA	-	-	-	SA	SA			SA
RA-1227	Irrigation	BTB		86	REST									Removed from program by Navajo, 4-13-15												NA	A [h]	-	-	A [h]	-	-	-	A [h]	A [h]			A [h]
RA-3156	Irrigation	BTB	53	87	REST	Not in gauging program						17-Jun	1520	7.00	20.7	1,703	2.3	-58.4	>200	Cloudy, black	NA	NA	NA	Yes		NA	A	-	-	A	-	-	-	A	A			A

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
RA-313	Irrigation	BTB/RJM	54	88	REST	Not in gauging program						17-Jun	855	7.07	22.9	1,789	2.9	53.7	2.4	Clear	NA	NA	NA	Yes		NA	A	-	-	A	-	-	-	A	A			A
KWB-7	Monitoring	BTB	55	89	REST	16-Jun	1305	NP	19.71	0.00	34.83	16-Jun	1330	6.81	21.5	3,265	2.2	-128.4	2.4	Clear	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	-	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]			SA [d]
MW-135	Monitoring	BTB	56	90	REST	16-Jun	1730	NP	30.71	0.00	65.55	17-Jun	1420	6.81	20.5	5,471	2.2	84.6	9.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-20	Monitoring	BTB/RJM	57	91	TMD	16-Jun	1621	NP	17.08	0.00	26.66	17-Jun	1235	6.96	23.5	3,990	2.0	63.1	3.1	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
NP-3	Monitoring	BTB		92	TMD	16-Jun	1618	NP	19.02	0.00	21.59			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
NP-4	Monitoring	BTB		93	TMD	16-Jun	1615	NP	31.43	0.00	36.98			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
NP-2	Monitoring	BTB		94	TMD	16-Jun	1625	NP	19.23	0.00	21.49			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
NP-1	Monitoring	BTB	58	95	TMD	16-Jun	1630	NP	18.18	0.00	21.88	17-Jun	940	6.67	22.5	4,090	2.0	19.1	1.5	Clear	Yes	Yes	Yes	Yes		SA	SA	-	-	SA	-	-	-	A	A			A
NP-6	Monitoring	BTB		96	TMD	16-Jun	1634	NP	14.57	0.00	20.35										Yes	Yes	Yes	Yes		SA	B	-	-	B	-	-	-	-	-			-
MW-8	Monitoring	BTB/RJM	59	97	TMD	16-Jun	1800	NP	15.87	0.00	23.30	17-Jun	1130	6.94	23.3	4,720	2.1	45.1	3.4	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-21	Monitoring	BTB/RJM	60	98	TMD	16-Jun	1752	NP	15.21	0.00	25.12	17-Jun	1035	7.00	23.6	4,950	1.7	31.8	2.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-9	Monitoring	BTB		99	TMD	16-Jun	1735	NP	16.43	0.00	22.25			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
MW-71	Monitoring	BTB	61	100	TMD	16-Jun	1740	NP	16.63	0.00	21.67	17-Jun	1415	6.94	20.4	6,059	1.5	-40.4	1.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	A	A	A	A			A
MW-68	Monitoring	BTB/RJM	62	101	TMD	16-Jun	1815	NP	21.09	0.00	26.52	17-Jun	940	6.96	23.8	2,780	1.3	-81.9	3.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-27	Monitoring	BTB	63	102	TMD	16-Jun	1708	NP	18.93	0.00	30.28	17-Jun	1325	6.90	22.6	1,950	1.7	18.0	3.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-89	Monitoring	BTB	64	103	TMD	16-Jun	1703	NP	12.62	0.00	20.28	17-Jun	1040	6.89	19.9	3,381	2.3	64.7	4.1	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-16	Monitoring	BTB	65	104	TMD	16-Jun	1711	NP	9.66	0.00	21.24	17-Jun	1135	6.86	18.5	4,833	1.3	84.6	2.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-26	Monitoring	BTB	66	105	TMD	16-Jun	1720	NP	7.76	0.00	27.58	17-Jun	1230	6.96	18.9	6,290	0.7	-22.7	1.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
KWB-11A	Monitoring	BTB	67	106	REST	16-Jun	1400	NP	20.14	0.00	42.27	16-Jun	1425	6.78	22.3	3,974	0.7	-91.3	1.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
KWB-11B	Monitoring	BTB	68	107	REST	16-Jun	1450	NP	20.88	0.00	72.45	16-Jun	1515	6.87	21.7	3,034	1.1	-28.7	2.1	Clear	Yes	Yes	Cracked pad	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
KWB-3AR	Monitoring	BTB		108	REST									Removed from program by Navajo, 4-13-15 (farmer Jack Joy, 575-365-6042)												SA	SA	SA	-	SA	SA	SA	SA	SA	SA			SA
MW-115	Monitoring	BTB	69	109	REST	16-Jun	855	NP	16.18	0.00	27.50	16-Jun	920	6.81	19.3	4,027	2.8	27.5	1.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-114	Monitoring	BTB	70	110	REST	16-Jun	955	NP	15.98	0.00	38.25	16-Jun	1020	6.68	21.9	3,307	1.7	57.1	1.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-125	Monitoring	BTB	71	111	REST	16-Jun	1030	NP	19.17	0.00	28.31	16-Jun	1055	6.81	20.9	4,180	2.1	42.8	3.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-117	Monitoring	GDS/OJD	72	112	REST	16-Jun	1050	NP	14.65	0.00	27.22	16-Jun	1115	6.48	20.3	3,220	2.6	76.1	21.5	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-118	Monitoring	GDS/OJD	73	113	REST	16-Jun	955	NP	17.76	0.00	28.29	16-Jun	1020	6.41	18.2	3,410	3.4	75.9	27.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
NP-9	Monitoring	GDS		114	TMD	16-Jun	1732	NP	16.78	0.00	25.65			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
MW-119	Monitoring	GDS	74	115	REST	16-Jun	920	NP	16.02	0.00	28.11	16-Jun	945	7.06	19.7	6,470	1.4	105.3	7.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
NP-5	Monitoring	GDS		116	REST	16-Jun	1554	NP	16.32	0.00	25.09										Yes	Yes	Yes	Yes		SA	B	B	-	B	B	-	-	B	B			B
MW-136	Monitoring	GDS	75	117	REST	16-Jun	1601	NP	16.69	0.00	27.90	17-Jun	915	6.95	21.2	6,280	1.0	93.2	17.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
MW-126A	Monitoring	GDS	76	118	REST	16-Jun	1440	NP	20.60	0.00	37.51	16-Jun	1505	6.92	23.5	4,650	1.1	-140.6	6.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-126B	Monitoring	GDS	77	119	REST	16-Jun	1400	NP	20.45	0.00	51.43	16-Jun	1425	6.87	22.8	6,030	1.0	103.4	2.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-127	Monitoring	GDS		120	REST	16-Jun	1349	22.45	24.24	1.79	53.21			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-129	Monitoring	GDS		121	REST	16-Jun	1340	23.17	24.08	0.91	50.78			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	A [d]	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-#18A [e]	Recovery [d]	GDS/SCU	78	122	REST	16-Jun	925	NP	16.94	0.00	17.78	16-Jun	0950	6.95	22.1	3,630	2.0	109.1	9.8	Clear	Yes	Yes	Yes	Yes		SA	A	-	-	A	A	-	-	A	A			A
KWB-1A	Monitoring	GDS	79	123	REST	16-Jun	1541	NP	17.91	0.00	33.50	17-Jun	1000	6.91	21.9	6,760	2.1	112.2	2.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	SA	SA	SA	SA			SA
KWB-1B	Monitoring	GDS		124	REST	16-Jun	1543	NP	19.63	0.00	33.92			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
KWB-1C	Monitoring	GDS		125	REST	16-Jun	1545	NP	20.24	0.00	52.71										Yes	Yes	Yes	Yes		SA	B	B	-	B	B	-	-	B	B			B
KWB-10R	Monitoring	GDS		126	REST	16-Jun	1535	18.56	21.40	2.84	29.46			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-131	Monitoring	GDS	80	127	REST	16-Jun	1255	NP	25.85	0.00	53.35	16-Jun	1320	6.74	26.2	2,980	1.9	-144.4	14.3	Clear, brown particles	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
KWB-5	Monitoring	GDS/OJD		128	REST	16-Jun	1655	25.72	27.11	1.39	37.68			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-111	Monitoring	GDS	81	129	REST	16-Jun	1725	NP	27.05	0.00	40.83	17-Jun	1045	6.62	25.5	4,270	1.6	-103.0	>200	Cloudy, tan	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
KWB-6	Monitoring	GDS		130	REST	16-Jun	1241	23.89	26.45	2.56	36.44			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]		2H20	SA [d]
MW-112	Monitoring	GDS		131	REST	16-Jun	1247	23.15	25.09	1.94	37.54			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-132	Monitoring	GDS		132	REST	16-Jun	1236	21.25	23.75	2.50	42.66			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-57	Monitoring	GDS/OJD	82	133	REST	16-Jun	1500	NP	21.45	0.00	34.32	16-Jun	1525	6.73	24.1	4,270	3.4	99.6	7.5	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
RW-#11-0 [e]	Recovery [d]	GDS		134	REST	16-Jun	1224	Dry	Dry	Dry	22.20			Not sampled (Dry)							Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
KWB-9	Monitoring	GDS		135	REST			(Historically-obstructed @ 15.11')						Removed from program by Navajo, 4-26-16 (farmer Jack Joy, 575-365-6042)												SA	A	A	-	A	A	A	A	A	A			A
KWB-12A	Monitoring	GDS/OJD	83	136	REST	16-Jun	1240	NP	23.88	0.00	25.03	16-Jun	1305	6.73	25.5	3,050	3.2	66.9	7.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
KWB-12B	Monitoring	GDS/OJD	84	137	REST	16-Jun	1330	NP	23.73	0.00	39.39	16-Jun	1355	6.75	23.9	2,690	4.7	75.7	6.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
KWB-2R	Monitoring	GDS		138	REST	16-Jun	1652	24.57	24.73	0.16	39.39			No sampling (LNAPL 0.03' or greater)							Issue	Issue	Issue	Issue	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-58	Monitoring	GDS		139	REST	16-Jun	1703	23.43	24.05	0.62	33.06			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	-	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]			SA [d]
KWB-13	Monitoring	GDS/OJD	85	140	REST	16-Jun	1730	NP	28.42	0.00	33.10	16-Jun	1755	6.74	25.3	3,020	5.4	-6.5	>200	Cloudy, tan	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	A	A	A	A			A
MW-103	Monitoring	SCU	86	141	REST	16-Jun	1245	NP	17.69	0.00	25.22	16-Jun	1310	7.03	33.6	12,040	1.7	-324.7	4.8	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-104	Monitoring	SCU	87	142	REST	16-Jun	1350	NP	13.85	0.00	21.97	16-Jun	1415	6.95	27.2	1,804	1.4	-327.5	3.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-64	Monitoring	SCU	88	143	REST	16-Jun	1505	20.95	20.96	0.01	34.08	16-Jun	1530	6.87	35.9	2,360	2.4	-329.0	20.0	Clear	Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-65	Monitoring	SCU		144	REST	16-Jun	1550	17.84	18.99	1.15	28.78			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
RW-5	Recovery [d]				S Refinery			Not in gauging program						Not in sampling program											Y	-	-	-	-	-	-	-	-	-	-			-
RW-5R	Recovery [d]	SCU		145	REST	16-Jun	1605	22.60	24.32	1.72	35.30			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-102	Monitoring	SCU	89	146	REST	16-Jun	1625	NP	16.65	0.00	26.45	16-Jun	1650	6.84	27.6	2,260	2.2	-312.4	8.5	Clear	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
RW-4	Recovery [d]	SCU	90	147	REST	16-Jun	1722	NP	15.05	0.00	36.62	17-Jun	915	6.73	26.7	2,110	2.2	-303.8	20.8	Clear	Yes	Yes	Yes	Yes		SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
RW-6	Recovery [d]	SCU		148	REST	16-Jun	1715	23.60	26.12	2.52	34.90			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-99	Monitoring	SCU	91	149	REST	16-Jun	1731	NP	20.07	0.00	27.80	17-Jun	1250	6.49	28.0	1,031	2.4	-282.2	34.0	Clear	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-66	Monitoring	SCU/GDS	92	150	REST	16-Jun	1738	NP	19.34	0.00	29.80	17-Jun	1245	6.82	25.0	2,730	1.6	-170.3	7.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-28	Monitoring	SCU/GDS	93	151	REST	16-Jun	1745	NP	20.18	0.00	27.82	17-Jun	1340	7.22	24.3	4,480	1.2	-318.0	2.0	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-59	Monitoring	SCU	94	152	REST	16-Jun	1750	NP	16.62	0.00	32.72	17-Jun	1015	6.80	26.2	2,910	2.5	-244.5	10.4	Clear, light gray tint	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-60	Monitoring	SCU	95	153	REST	16-Jun	1755	NP	17.95	0.00	37.78	17-Jun	1145	6.57	27.7	3,560	2.9	-303.0	5.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-107	Monitoring	SCU/GDS		154	REST	16-Jun	1805	16.43	18.35	1.92	19.05			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A	A	A	A	A	-	-	A	A			A
MW-128	Monitoring	SCU/GDS		155	REST	16-Jun	1812	18.35	20.26	1.91	35.35			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-116	Monitoring	SCU	96	156	REST	16-Jun	1050	NP	16.18	0.00	27.63	16-Jun	1115	6.84	18.7	3,976	2.6	-42.2	3.1	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-46R	Monitoring	SCU	97	157	TMD	16-Jun	1820	NP	13.33	0.00	19.36	17-Jun	1345	6.71	25.3	3,520	2.4	24.7	15.7	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
UG-3R	Monitoring	SCU	98	158	REST	15-Jun	1605	NP	22.37	0.00	38.58	15-Jun	1630	6.70	24.2	2,260	5.6	77.0	3.8	Clear	Yes	Yes	Yes	Yes		A	A	A	A	A	A	A	A	A	A			A
UG-4	Monitoring	SCU	99	159	REST	15-Jun	1655	NP	19.58	0.00	39.24	15-Jun	1720	6.75	25.0	3,670	2.7	122.5	9.0	Clear	Yes	Yes	Yes	Yes		A	A	A	A	A	A	A	A	A	A			A
UG-1	Monitoring	SCU	100	160	REST	15-Jun	1745	NP	13.02	0.00	24.08	15-Jun	1810	6.97	26.6	3,190	4.1	130.3	5.0	Clear	Yes	Yes	Yes	Yes		A	A	A	A	A	A	A	A	A	A			A
UG-2	Monitoring	SCU	101	161	REST	15-Jun	1840	NP	16.81	0.00	29.28	15-Jun	1910	7.10	25.4	2,230	3.2	124.6	3.0	Clear	Yes	Yes	Yes	Yes		A	A	A	A	A	A	A	A	A	A			A
MW-101	Monitoring	TAB/RJM	102	162	REST	16-Jun	1440	NP	14.25	0.00	24.10	16-Jun	1505	6.87	26.5	1,641	2.4	-209.9	5.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-105	Monitoring	TAB	103	163	REST	16-Jun	1650	NP	9.69	0.00	17.20	17-Jun	925	7.15	24.1	1,736	1.1	-354.7	9.8	Clear	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
RW-2	Recovery [d]	TAB		164	REST	16-Jun	1530	15.02	15.53	0.51	36.13			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	A [d]	A [d]	A [d]	-	-	A [d]	A [d]	1H20		A [d]
MW-61	Monitoring	TAB	104	165	REST	16-Jun	1520	NP	12.90	0.00	29.30	17-Jun	1025	6.64	26.4	2,980	1.1	-367.1	2.7	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-62	Monitoring	TAB	105	166	REST	16-Jun	1500	NP	15.50	0.00	29.50	17-Jun	1220	6.49	26.5	2,800	1.4	-351.3	4.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-93	Monitoring	TAB	106	167	REST	16-Jun	1550	NP	9.90	0.00	20.23	17-Jun	1125	6.47	23.9	2,970	1.0	-353.0	3.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A	1H20		A
MW-43	Monitoring	TAB	107	168	REST	16-Jun	1400	NP	13.99	0.00	19.67	17-Jun	1425	6.72	29.1	3,190	1.1	-346.3	6.0	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-137	Monitoring	TAB		169	REST	16-Jun	1430	11.38	12.47	1.09	29.60			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	1H20		SA
MW-138	Monitoring	TAB		170	REST	16-Jun	1420	12.89	15.49	2.60	24.81			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	1H20		SA [d]
MW-23	Monitoring	TAB	108	171	REST	16-Jun	1450	NP	16.24	0.00	23.10	17-Jun	1325	6.94	28.1	2,760	1.1	-310.6	3.3	Clear, yellow tint	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
TEL-4	Monitoring	TAB	109	172	TEL	16-Jun	1230	NP	12.67	0.00	27.27	16-Jun	1255	6.77	24.5	3,830	0.7	-308.9	5.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
TEL-3	Monitoring	TAB		173	TEL	16-Jun	1200	14.10	14.16	0.06	27.19			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
TEL-2	Monitoring	TAB	110	174	TEL	16-Jun	1100	NP	15.20	0.00	27.20	16-Jun	1125	6.92	25.8	3,290	0.7	-354.1	3.4	Clear, light sheen	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
TEL-1	Monitoring	TAB	111	175	TEL	16-Jun	1000	NP	14.52	0.00	27.00	16-Jun	1025	7.19	24.0	2,550	0.8	-279.1	4.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-39	Monitoring	TAB/RJM	112	176	REST	16-Jun	1110	NP	15.22	0.00	25.44	16-Jun	1135	7.26	27.3	2,830	1.5	-297.3	3.2	Clear	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
MW-98	Monitoring	TAB	113	177	REST	16-Jun	1330	NP	12.88	0.00	25.60	16-Jun	1355	6.67	25.5	3,210	0.8	-376.6	6.3	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
RW-10	Recovery [d]	TAB	114	178	REST	16-Jun	900	NP	15.18	0.00	22.49	16-Jun	925	7.10	22.3	2,520	0.9	-326.5	2.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-40	Monitoring	TAB/SCD	115	179	REST	16-Jun	900	NP	13.86	0.00	24.75	16-Jun	925	6.70	21.7	2,670	1.5	-365.9	9.1	Clear, black particles	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-41	Monitoring	TAB/RJM	116	180	REST	16-Jun	1015	NP	14.02	0.00	21.56	16-Jun	1040	6.56	25.1	5,300	2.2	-217.4	6.7	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
RW-9	Recovery [d]	TAB/RJM	117	181	REST	16-Jun	1210	NP	15.19	0.00	21.83	16-Jun	1235	6.83	26.0	3,610	1.3	-346.8	1.5	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-42	Monitoring	TAB	118	182	REST	16-Jun	1610	NP	15.42	0.00	24.32	17-Jun	1420	6.76	25.2	6,110	2.4	-341.8	5.2	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-29	Monitoring	TAB/SCD	119	183	REST	16-Jun	955	NP	20.76	0.00	24.22	16-Jun	1020	6.88	23.1	4,270	1.7	-325.8	8.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
RW-#16B [e]	Recovery [d]	TAB/RJM	120	184	REST	16-Jun	930	NP	17.10	0.00	17.70	16-Jun	940	6.79	25.5	4,080	2.0	29.2	8.5	Clear	Yes	Yes	Cracked pad	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-30	Monitoring	TAB		185	REST	16-Jun	1600	NP	15.90	0.00	23.50			Not in sampling program							Yes	Yes	Yes	Yes		SA	Not in sampling program											
MW-56	Monitoring	TAB/SCD	121	186	NCL	16-Jun	1100	NP	16.67	0.00	26.50	16-Jun	1125	6.70	22.3	3,850	1.3	-156.0	1.9	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	-	-	A	A			A
MW-49	Monitoring	TAB/RJM	122	187	TEL	16-Jun	1315	NP	12.95	0.00	33.07	16-Jun	1340	6.59	27.2	2,740	1.5	-373.4	6.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
MW-106	Monitoring	TAB/RJM	123	188	REST	16-Jun	1600	NP	10.32	0.00	22.80	16-Jun	1625	6.63	26.6	2,830	1.6	-377.1	6.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-45	Monitoring	TAB	124	189	NCL	16-Jun	1630	NP	11.27	0.00	15.05	17-Jun	1520	6.93	23.2	4,530	1.4	-227.8	3.0	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	SA	SA	SA	SA			SA
MW-139	Monitoring	CJH	125	190	REST	16-Jun	1120	NP	13.86	0.00	29.60	16-Jun	1145	6.66	23.4	4,190	1.5	-282.9	8.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-50	Monitoring	CJH	126	191	REST	16-Jun	1205	NP	14.85	0.00	28.22	16-Jun	1235	6.84	25.1	7,960	1.1	-257.1	6.8	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
MW-97	Monitoring	CJH		192	REST	16-Jun	1250	10.81	14.06	3.25	21.20			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]	1H20		SA [d]
MW-92	Monitoring	CJH		193	REST	16-Jun	1305	13.11	13.67	0.56	22.60			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
RW-1	Recovery [d]	CJH		194	REST	16-Jun	1320	14.37	15.08	0.71	35.39			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	A [d]	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-91	Monitoring	CJH	127	195	REST	16-Jun	1335	NP	12.78	0.00	25.35	16-Jun	1400	6.48	24.7	3,870	1.4	-387.9	8.8	Clear, yellow tint	Yes	Yes	Yes	Yes		SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
MW-90	Monitoring	CJH	128	196	REST	16-Jun	1420	NP	12.66	0.00	22.80	16-Jun	1445	6.71	23.1	3,730	1.0	-376.3	7.4	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-96	Monitoring	CJH	129	197	REST	16-Jun	1505	NP	12.85	0.00	25.57	16-Jun	1530	6.70	24.7	2,210	1.1	-369.0	5.6	Clear	Yes	Closure	Issue	Yes		SA	SA	SA	SA	SA	SA	-	-	SA	SA			SA
MW-94	Monitoring	CJH		198	REST	16-Jun	1550	14.63	18.50	3.87	23.45			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
RW-8	Recovery [d]	CJH		199	REST	16-Jun	1600	13.62	15.72	2.10	37.22			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	A [d]	A [d]	-	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
MW-67	Monitoring	CJH		200	REST	16-Jun	1610	12.18	12.23	0.05	27.30			No sampling (LNAPL 0.03' or greater)							Yes	Yes	Yes	Yes	Y	SA	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]	SA [d]			SA [d]
MW-95	Monitoring	CJH	130	201	REST	16-Jun	1620	NP	14.86	0.00	25.37	16-Jun	1645	6.73	24.6	2,860	0.6	-317.1	3.1	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A	1H20		A
RW-7	Recovery [d]	CJH	131	202	REST	16-Jun	1700	NP	13.84	0.00	37.00	17-Jun	1220	6.64	25.4	2,410	1.2	-368.5	8.3	Clear, black tint, black particles, sheen	Yes	Yes	Yes	Yes		SA	A [d]	A [d]	A [d]	A [d]	A [d]	-	-	A [d]	A [d]			A [d]
NCL-34A	Monitoring	CJH	132	203	NCL	16-Jun	1706	NP	13.40	0.00	19.26	17-Jun	1310	6.54	24.6	2,400	1.4	-370.1	5.0	Clear	Yes	Yes	Issue	Yes		SA	SA [d]	SA [d]	-	SA [d]	SA [d]	-	-	SA [d]	SA [d]			SA [d]
NCL-33	Monitoring	CJH	133	204	NCL	16-Jun	1713	NP	12.10	0.00	19.60	17-Jun	1355	6.45	24.7	4,780	1.1	-241.7	9.2	Clear, orange particles	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
NCL-44	Monitoring	CJH	134	205	NCL	16-Jun	1718	NP	11.85	0.00	21.34	17-Jun	1135	6.56	24.3	3,170	1.9	-280.4	6.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA

Table 1: Gauging Data, Groundwater Field Parameters and Well Inspections, 1H20

Navajo Refining Company - Artesia Refinery, Artesia, New Mexico

Well ID	Well Type	HMI Use	HMI Use (# Samp Wells)	HMI Use (Field-Strategy Order)	Location	Gauge Date	Gauge Time	Hydrologic Monitoring-Collected Data (Gauging/Groundwater Field Parameter/Well Inspection)																	PSH Expected? [b]	Gauging Frequency	Analytical Suite and Frequency [c]											
								Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	LNAPL Column (ft)	Total Depth (ft btoc)	Sample Date	Sample Time	pH (S.U.)	T (C)	Spec. Cond. (umho/cm)	D. O. (mg/l)	ORP (mg/l)	Turb. (NTU)	Water Clarity	Cap	Casing	Well Secured	Label			Purge Parameters	DRO	GRO	VOC	Metals (As, Ba, Cr, Fe, Pb, Mn, Se)	Metals (Hg, Ni, V, B, Cd, Co, U)	Cyanide	Cations/Anions	Nitrates / Nitrites as Nitrogen	SVOC (8270)	EDB (8011)	TDS
NCL-32	Monitoring	CJH	135	206	NCL	16-Jun	1725	NP	12.26	0.00	20.04	17-Jun	1050	6.79	23.0	3,200	1.1	-127.7	8.6	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
MW-108	Monitoring	CJH	136	207	NCL	16-Jun	1730	NP	15.30	0.00	27.74	17-Jun	925	6.78	24.8	1,761	1.3	-378.9	9.1	Clear, yellow tint	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
NCL-31	Monitoring	CJH	137	208	NCL	16-Jun	1735	NP	12.17	0.00	20.16	17-Jun	1005	6.82	26.1	2,890	1.3	-278.6	6.3	Clear	Issue	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
MW-19	Monitoring	CJH		209	NCL	16-Jun	1740	NP	12.45	0.00	22.08			Not in sampling program							Yes	Yes	Issue	Yes		SA	Not in sampling program											
MW-55	Monitoring	CJH/BRH	138	210	NCL	16-Jun	1015	NP	15.02	0.00	26.85	16-Jun	1040	6.58	18.8	3,280	1.9	72.3	7.7	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA
RW-#17A [e]	Recovery [d]	CJH/GDS	139	211	REST	16-Jun	1755	NP	14.54	0.00	16.01	17-Jun	1510	8.02	22.3	8,270	2.9	-77.5	3.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	A	A	A	-	-	A	A			A
MW-18	Monitoring	CJH	140	212	NCL	16-Jun	1749	NP	14.14	0.00	22.20	17-Jun	1440	6.74	24.3	3,280	1.3	-242.5	3.6	Clear	Yes	Yes	Yes	Yes		SA	A	A	-	A	A	A	A	A	A			A
MW-54A	Monitoring	CJH	141	213	NCL	16-Jun	930	NP	14.77	0.00	31.30	16-Jun	955	6.53	22.7	2,580	1.7	65.0	5.9	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
MW-54B	Monitoring	CJH		214	NCL	16-Jun	1010	NP	14.83	0.00	46.80										Yes	Yes	Yes	Yes		SA	B	B	B	B	B	-	-	B	B			B
NCL-49	Monitoring	CJH	142	215	NCL	16-Jun	1020	NP	18.18	0.00	32.18	16-Jun	1045	6.87	23.3	3,630	1.9	133.7	4.2	Clear	Yes	Yes	Yes	Yes		SA	SA	SA	-	SA	SA	-	-	SA	SA			SA
MW-53R	Monitoring	CJH		216	NCL	16-Jun	1110	MW-53 not located			23.6??			MW-53 was lost in previous construction; MW-53R has not yet replaced MW-53, 1H20												SA	A	A	-	A	A	-	-	A	A			A
KWB-P3	Monitoring				Field E of Refinery			Not in gauging program						Not in sampling program												Not included in monitoring program due to distance from impacts												

Notes:

Abbreviations:

A = Annual (Mar/Apr event)
B = Biennial (starts Mar/Apr 2011)
BR = Bolton Road
DRO = Diesel Range Organics
E = East
EP = Evaporation Ponds
ft bgs = ft below ground surface
ft btoc = ft below top of casing
ft MSL = ft Mean Sea Level
GRO = Gasoline Range Organics
HR = Haldeman Road
in = inches
N = North
NA = Not accessible
NAPI = North API Separator
NCL = North Colony Landfarm
NE = Northeast
NW = Northwest
OCD = Oil Conservation District
PSH = Phase Separated Hydrocarbon
ROW = right of way
RR = Richey Road
S = South
SA = Semi-annual (Mar/Apr and Sep/Oct events)
SE = Southeast
SW = Southwest
TMD = Three Mile Ditch
TEL = Tetra Ethyl Lead Impoundment
UG = Upgradient
US285 = U.S. Highway 285
US82 = U.S. Highway 82
VOC = Volatile Organic Compounds
W = West
Y = Yes

= Sampled as part of RO Field Program, 4Q19

Footnotes:

[a] Well const. info. provided where available. TOC & ground surface elevs relative to benchmark G-416. Total depth based on 4/2010 measurements.

[b] PSH was present during March 2012 gw monitoring event or a recovery pump is in place. Note that recovery wells are gauged at least monthly.

[c] Analytical Suite to include the following:

1. Purge parameters to be measured and recorded in the field will include pH, temp, spec. cond., diss. oxy., and oxidation-reduction potential.
2. DRO by Method 8015Mod.
3. GRO by Method 8015Mod.
4. VOCs by Method 8260, to include methyl tert butyl ether (MTBE).
5. Total metals by Method 6010/6020 and/or 7470. Specific metals shown in heading, abbreviations from periodic chart (incl B, Cd, Co, U, per 3-7-16 State request).
6. Dissolved metals - same list as total metals but only analyzed during April event (field filtered by HMI)
7. Cyanide by Method SM4500.
8. Cations/anions to include Calcium, Potassium, and Sodium by Method 6010 or 6020 and Sulfate, Chloride and Fluoride by Method 300.
9. Nitrates/Nitrites as Nitrogen by Method 300.
10. Total Dissolved Solids by Method 2540C.

"-" indicates parameter not required.

Note - samples will not be collected from any well where PSH is measured to be 0.03 feet thick or greater.

[d] Samples to be collected at frequency indicated only if <0.03 feet of PSH is present.

[e] Recovery trenches 11, 15, 16, 17 and 18 have multiple vertical "wells". Gauging & sampling points are: RW #11-0, RW #15C, RW #16B, RW #17A and RW #18A.

= Well with recently gauged LNAPL (light nonaqueous phase liquid)

MW-53R (installed March 2020)replaced the formerly-destroyed MW-53, due to city road construction

HMI Groundwater

Hydrologic Monitoring
1654 W. Sam Houston Pkwy. N.
Houston, Texas 77043

Phone 713.464.5206
Fax 713.464.5207

M E M O R A N D U M

Groundwater Monitoring Standard Operating Procedures
Navajo Refining LLC – Artesia, New Mexico

HMI conducts low-flow groundwater sampling in accordance with the site Sampling and Analysis Plan and EPA guidance (including Puls and Barcelona, 1996 EPA Guidance on Low-Flow Groundwater Sampling; REV No. 4, September 19, 2017, and Yeskis & Zavala, 2002, EPA/542:S-02/00, Groundwater Sampling Guidelines for Superfund and RCRA Project Managers).

Groundwater Sampling Methodology

HMI conducts low-flow groundwater sampling using a peristaltic pump and dedicated polyethylene tubing at wells with requisite depths-to-water. At a limited number of wells with depths-to-water greater than peristaltic range, low-flow groundwater sampling is conducted using dedicated or non-dedicated bladder pumps. In 2016, at no cost to TRC, HMI installed HMI-owned bladder pumps in a limited number of wells (approximately four). At such time that HMI no longer conducts routine groundwater monitoring at the site, it respectfully requests the opportunity to recover these dedicated bladder pumps. Sample intakes are set at midscreen, when possible (generally at least two feet from the base of the well). Sample intake depths are permanently marked, ensuring future sampling events consistently monitor the targeted water-bearing interval. During sampling with a peristaltic pump, the sample tube is attached to the pump using a one-foot section of dedicated, flexible silicone tubing (item #5703, Geotech Environmental Equipment, Inc.). A two-foot segment of polyethylene tubing connects the silicone tubing in the pump to the flow-through cell, using a disposable segment of silicone tubing. Purging commences through a sealed flow-through cell at EPA-recommended purge rates (generally 0.1 to 0.2 liters/minute), while well drawdown is monitored. Groundwater field parameter readings are measured at 0.5-liter intervals (generally an equivalent of one cell-volume "turnover"). Field parameters of pH, specific conductivity, temperature, dissolved oxygen, and oxidation-reduction potential are monitored inside the cell. Turbidity is monitored outside the cell. Groundwater field instrumentation is calibrated and recorded daily in accordance with manufacturer specifications.

Purging continues until a requisite volume of groundwater is purged (generally a minimum of 3,000 ml or six flow-through cell volumes), and field parameters have stabilized in accordance with EPA guidance:

Water Quality Parameters (Stabilization Parameters in Accordance with EPA (2002), Groundwater Sampling Guidelines for Superfund and RCRA Project Managers, Yeskis & Zavala, EPA/542:S-02/001)

- pH +/- 0.1 units;
- Temperature -
- Conductivity +/- 3%
- Dissolved Oxygen +/- 0.3 mg/L
- ORP +/- 10%
- Turbidity 10%

Immediately prior to sampling, the input tubing to the flow-through cell is disconnected from the disposable silicone receiving tubing on the input barb on the flow-through cell, and groundwater samples are collected directly into lab-supplied containers. Groundwater samples are placed in iced coolers, and remain in HMI's custody until shipped to ESC Lab Sciences via FedEx-overnight. Peristaltic tubes and/or dedicated bladder pumps may be dedicated in respective wells. Alternatively, dedicated tubing may be retrieved, bagged, labeled, and stored in tubs maintained at HMI. Wells with very limited water column thicknesses may be sampled with disposable bailers. Active recovery well and irrigation wells are sampled using sample ports. The purging and sampling process is documented on groundwater sampling field forms.

Cross-Contamination Prevention Program

Dedicated peristaltic tubing and dedicated bladder pumps are used as possible, to minimize any potential cross-contamination issues during the groundwater monitoring process. Remaining non-dedicated equipment (e.g., electronic gauging probes or non-dedicated bladder pumps, etc.) is properly decontaminated prior to use and between wells. The decontamination procedure may include a combination of chemical and mechanical decontamination. For example, scrubbing with ethyl alcohol (isopropanol) as warranted, followed by scrubbing using an Alconox-water solution, and distilled water rinse. The decontamination procedure for non-dedicated bladder pumps consists of cycling an Alconox-water solution through the pump bladder. Distilled water is cycled through the pump bladder, followed by decontaminating the exterior body of the pump, using the methods outlined above.

HMI Deliverables

HMI provides field documentation of groundwater monitoring activities in a deliverables package that includes a brief narrative, summary table (with gauging data, field parameters, well inspection data, and required analytical scope), groundwater sampling forms, field instrument calibration log, and chain-of-custody forms (by Refinery "Area"), and a groundwater sampling SOP memo.

HMI Groundwater

HYDROLOGIC MONITORING JOB HAZARD ANALYSIS

Activity: Groundwater Sampling	**Date:** 6/16/20 6/17/20
	Project: Navajo-Artesia GW Samp.
Description of the work: Collect fluid level information and water samples from monitoring wells. NOTE: All site workers have STOP WORK Authorization at any time site conditions change and/or become unsafe	**Site Supervisor:** Scott Ude Scott Ude Scott Ude Scott Ude Scott Ude **Attendees Signatures:**

Work Activity Sequence	Potential Health and Safety Hazards	Hazard Controls
• General Hazards	• Accidents due to lack of training	• All workers will complete Safety Council Basic Plus Training and all site-specific training. • All workers will complete OSHA 40-hr HAZWOPER training with yearly updates. • Workers will be trained prior to performing new activities. • Tailgate safety meetings will be held daily.
	• Head Injury	• ANSI-approved hard hats will be worn at all times, in the manner they were designed (brim forward, no modifications no ball caps, etc.) Bump hats and Cowboy hard hats are not permitted.
	• Hearing Damage	• Workers will wear hearing protection whenever voices must be raised above normal conversational speech or when noise levels exceed 85 decibels due to loud noise sources such as working near heavy equipment.
	• Hand Injury	• Leather gloves will be worn when handling

Work Activity Sequence	Potential Health and Safety Hazards	Hazard Controls
		sharp, rough, or slippery surfaces. • Appropriate gloves for chemicals will be worn per project HASP.
	• Injuries resulting from manual lifting	• Workers will be instructed in safe lifting techniques (keep back straight, bend at knees, keep load close to body, lift smoothly, and do not twist at the waist. • Split heavy loads into smaller loads when possible. • Stretch before doing task • Make sure the path of travel is clear prior to the lift.
	• Foot Injury	• Workers will wear sturdy leather safety-toed boots that reach the ankle at all times. • For wet conditions or for chemical hazards proper water resistant overboots or chemical resistant safety-toed boots must be worn.
	• Eye Injury	• Workers will wear protective eyewear with sideshields that meet ANSI Z-87 at all times. If the worker wears prescription eyeglasses they must meet the same criteria or wear ANSI Z-87 safety over glasses. • Workers must have immediate access to Chemical monogoggles. Retaining rings are not permitted.
	• Slips, trips, and falls	• Walking/working surfaces will be kept free of clutter, debris, and congestion to the greatest extent possible. • Personnel should be aware of wet/muddy surfaces and use caution. Use caution when traversing uneven ground.
	• Injuries associated with insects, snakes, spiders, alligators, and poisonous plants	• Workers will wear snake chaps, leggings or sturdy rubber knee high boots when walking in uncleared, grassy areas. • Workers will avoid walking in areas where snakes or alligators may hide. Always look ahead where you are walking for signs of either. Use caution when moving or lifting objects that could be used for cover. Never reach under or behind objects, or into other areas where snakes or alligators may hide. • Workers will use insect repellant for all types of biting / stinging insects. Use care when opening wells to avoid bites and / or stings. • Workers will always use the buddy system and have a means of contacting emergency

Work Activity Sequence	Potential Health and Safety Hazards	Hazard Controls
		aid if needed by cell phone or Radio. • Workers will immediately wash any areas that were exposed to poisonous plants.
	• Chemical Exposure	• MSDS will be kept onsite in a location that all workers can access. • All workers must know where the emergency rally point is located when an evacuation alarm sounds in the plant. • Workers will sign in and out when they arrive and leave the work area.
	• Heat Stress	• All workers will take routine breaks in a cool, shaded area. • Workers will drink plenty of water throughout the day. • Workers will decrease intake of coffee and caffeinated soft drinks during working hours.
	• Vehicle accidents	• All vehicles must be inspected for safe operation onsite. • Vehicle operators must have a valid driver's license and will be instructed in safe operations while on the site. • Seat belts will be worn by all occupants. • When backing, use the buddy system or get out and look at position of objects. • All vehicles must contain a fire extinguisher, first aid kit, evacuation map, and route to hospital (map/directions). • Drivers will observe and not exceed posted plant speed limits. • Cell phone use is prohibited in a moving vehicle (drivers only) - hands free device not permitted. • Use caution at railroad crossings. • Watch for pedestrians walking into driving lanes.
	• Injury due to inclement weather	• Outdoor work will cease during extreme weather conditions, such as electrical storms, high wind, rain, and dangerous temperatures. • All equipment will be shut down when lightning is visible. • Workers will seek shelter indoors when possible or stay in vehicles.
• Groundwater Sampling	• Collect Measurements and Samples	• All site workers will wear proper PPE to prevent exposure to groundwater.

Work Activity Sequence	Potential Health and Safety Hazards	Hazard Controls
	• Using peristaltic pumps	• All workers using peristaltic pumps should inspect the power cord for damage before and after each use.
	• Fire extinguishers	• Fire extinguishers should be on hand and inspected.
	• Lifting	• All workers should use proper lifting techniques when lifting objects. Mechanical assistance may be used to lift objects weighing over 50 pounds.
	• Drive All Terrain Vehicles	• All workers that will drive All-Terrain Vehicles (ATVs) will follow site specific policies regarding use and operation of ATVs. • In addition, conditions of ATV use will be addressed on Safe Work Permit(s). • All workers will be trained in operating the ATV. • The maximum speed limit is 5 miles per hour. • Read owners manual prior to operating • ATVs are not made for multiple riders. Never carry anyone else on the ATV. • Stay seated at all times while ATV is in motion. • Do not operate the ATV on streets, highways or paved roads. • Driver must have a valid driver's license. • Driver exercise caution when loading and unloading ATV.

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Received by OCD: 11/22/2022 9:24:38 AM

6/16/20 Scott Ude 6/17/20 Scott Ude 6/18/20

Hydrologic Monitoring, LLC (HMI) Job Hazard Analysis (JHA) Job Safety Analysis (JSA) and Personal Protective Equipment (PPE) Assessment	Task Title: Mitigating *Exposure to Coronavirus "COVID-19"*		Date:	HMI Groundwater New: 4-7-20; Revised:
	Titles: HMI employees, contractors, and visitors	Supervisor (Print and Sign):	Prepared by: HMI Contractor Safety and Crisis Support	
Client Name / Site Location: HF /Artesia & Lovington	Locations: HMI-wide	Business Unit: All	Reviewed By: HMI Committee Approved By: HMI Committee	

Required or Recommended Personal Protective Equipment:

☐ Hard Hat ☒ Safety Glasses ☐ HiVis Vest ☐ Safety Toe Boots ☒ Gloves: Disposable, Work, etc based on task ☐ Hearing Protection ☒ Other: See below

For certain tasks (see JHA below) the following are required:

- Potable water and soap (preferable) or hand sanitizer with 60%> alcohol
- Paper towels
- Disinfectant wipes
- Tissues
- Nitrile gloves
- Safety glasses or goggles
- Disinfectant spray list of cleaning products to kill Coronavirus

Diluted household bleach solutions can be used in ploce of disinfectant wipes or sprays if appropriate for the surface. Be sure to test the surface for color-fastness prior to use. Follow manufacturer's instructions for application and proper ventilation. Check that the product is not past its expiration date. Never mix household bleach with ammonia or other cleanser. Unexpired household bleach is effective against caranaviruses when properly diluted.

- Prepare a bleach solution by mixing:
  - 5 tablespoons (1/3rd cup) bleach per gallon of water or 4 teaspoons bleach per quart of water

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This JHA applies to the 2019 Novel Coronavirus (SARS-CoV-2) or the disease known as "COVID-19". The Centers for Disease Control and Prevention (CDC), World Health Organization, (WHO), Occupational Safety and Health Administration (OSHA), and other public health agencies are considering the outbreak of COVID-19 to be a pandemic. It is important that employees, contractors, and visitors take standard precautions recommended by CDC and OSHA. For OSHA's guidance related to Hazard Recognition regarding COVID-19 visit https://www.osha.gov/SLTC/covid-19/hazardrecognition.html.

Risk Assessment: Incomplete information about incubation, infectious period, and transmissibility, as well as evolving circumstances make a definitive risk assessment challenging. In light of this, awareness and operationally informed precautions are warranted. Risk increases with increased exposure to persons potentially infected with COVID-19, warranting enhanced precautions described below. HMI will continue to monitor the situation closely in coordination with appropriate stakeholders and will adjust guidance as appropriate. HMI employees, contractors, and visitors should continue to maintain situational awareness for this outbreak.

Personnel should practice good hygiene, wash hands frequently, and cover their cough or sneeze. Stay away from work if you are ill and contact your health provider for guidance. Avoid unnecessary congregate settings where COVID-19 exposure is more probable. Keep your hands below your chin, and avoid touching mouth, eyes, nose and mucous membranes where contaminated hands can spread the disease to your respiratory system. These basic preventative measures reduce the exposure potential for personnel and slow the spread of communicable diseases.

While most COVID-19 lab confirmed cases do display symptoms, some persons may display mild or no symptoms. Symptoms may appear at different stages of the disease.

Operations/Contractor Work	Risk Category	Hazards	Protective Measures / PPE Guidance
1. Fitness for Duty (working from home or before reporting to work)	**Low**	**1. Being unfit for duty – impacted by illness (e.g coronavirus)**	**1a**. Check that you are fit for duty. If you feel unwell or show signs or symptoms of the coronavirus, do not come to work. Current CDC guidance is that if you have a temperature above 100.4 F [37.8 C], or in close contact with someone suspected of having the coronavirus, then you must stay home. If you have an elevated temperature, do not come to work and contact your healthcare provider. Also, contact your supervisor. By coming to work and onto the project site, employees are self-certifying that they do not have a temperature or show other signs of being unwell and are able to work within the guidelines of the CDC.
2. General Field Work	**Low**	**2a. Working around others** **Signs and Symptoms of** COVID-19 include; • Fever • Cough	**2a**. If experiencing signs or symptoms of COVID-19 infection, such as fever, dry cough, or other flu-like symptoms, do not report to work. If symptoms begin while at work, stop what you are doing immediately and contact your supervisor and an HMI Representative. HMI employees and/or their immediate supervisor are also to contact Human Resources immediately. Personnel and contractors shall maintain at least 6-foot distance from each other. Practice social distancing at tailgate meetings and in break rooms and job trailers.

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		• Extreme Fatigue • Difficulty breathing • Other Flu Like Symptoms	Limit the number of people in job trailers and other confined areas so that this distance can be maintained. If possible, hold meetings outside. If indoors, open window(s) for circulation. Wipe down window handles prior to opening and use gloves to open. Even when practicing social distancing, limit the amount of people in groups to less than 10 people, or fewer if directed by a particular jurisdictional order.
		2b. Encountering frequent touch points and shared equipment	**2b**. Wipe down and disinfect equipment before use with soap and water or alcohol wipes. Wear disposable gloves if possible or regularly wash hands when handling tools or equipment. Replace gloves regularly or wash hands, especially before eating or drinking. Clean hands often with soap and water for at least 20 seconds: • after using the restroom, • after you have been in a public place, • before and after eating, • after blowing your nose, coughing, or sneezing, • after smoking or vaping in designated areas. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands, including around and under fingernails, and rub your hands together until they feel dry. Wear safety glasses and gloves (nitrile or other work gloves) to avoid contact and to reduce touching face, eyes, nose, and mouth. Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Throw used tissues in the trash. Immediately wash or sanitize your hands.
		2c. Eating lunch and bathroom breaks	**2c**. Be sure to wash hands with soap and water whenever a bathroom is nearby. At minimum, do so during bathroom and lunch breaks. Use a paper towel to door handle when exiting bathroom. If using outside toilet facilities (i.e. Porta Johns), wash hands with soap and water or hand sanitizer both before and after opening or closing the door. If wearing nitrile gloves, change gloves prior to using the toilet and remove and dispose of them in a trash receptacle when finished. Use hand sanitizer after you dispose of the gloves. Where possible, personnel are encouraged to pack meals and snacks as needed for the duration of the work day and avoid visiting stores and restaurants. If necessary, modify your schedule to avoid restaurants and public restrooms during peak (i.e., crowded), periods to minimize contact with the public. Use drive-through service for

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			food pick-up if available. When eating lunch as a group, try to do so outside or in a space with windows open. Wipe down windows prior to opening. Maintain a distance of at least 6 feet and do not share dishes (e.g., bag of chips, communal salad bowl, etc.). Refrain from sharing a field office coffee pot.
3. General Office Work	**Low**	**3a. Working around others**	**3a**. Work from home when possible. Clean hands often with soap and water for at least 20 seconds: • after using the restroom, • after you have been in a public place, • before and after eating, or • after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands, including around and under fingernails, and rub your hands together until your hands feel dry. Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Throw used tissues in the trash. Immediately wash or sanitize your hands. Sit at least six feet apart from others. Change work stations to accommodate this. Even if you are practicing social distancing, you must still limit groups of people to 10 or fewer. Do not hold in-person meetings. After tailgate meetings and/or JHA reviews, supervisors should seek verbal agreement from each attendee and note each acknowledgement rather than passing around for signature. Make hand-sanitizers, sanitizing wipes, and other hygienic supplies readily available. Do not eat or hang out in common areas.
		3b. Encountering frequent "touch points" and handling shared equipment	**3b**. Wipe down keyboards, mouse, phone, headset/headphones, and other "touch points". Limit contact of shared items. Wipe down surfaces before coming into contact with them. Wash hands after handling or wear disposable gloves. In reception areas, use your own pen to sign in and out of offices. Do not eat candy out of candy dishes.

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			Assign someone to clean and disinfect frequently touched surfaces daily. Follow the manufacturer's instructions for cleaning and disinfection products (e.g., concentration, application method, and contact time).
4. Essential Work (deemed by Operations, Project Manager, EHS) where a continued 6 foot distance between persons in not possible.	**Low-Medium**	**4a.** Examples such as Operation and Maintenance tasks, groundwater and potable water monitoring, ballast water sampling, post-closure care services, etc.	4a. Mitigation tactics such as cloth face covers, face shields, gloves, facing away from another person, etc. must be implemented.

Additional Information

Prior to starting work, check that required supplies (i.e., disinfectant spray and wipes, soap, hand sanitizer, nitrile gloves) are available. Request re-supply if stock runs low.

Use alcohol-based hand sanitizer that contains at least 60% alcohol. Wash hands with soap and water whenever available. Remember that soap, including bar soap, is generally available and is considered superior to hand sanitizer or disinfectant wipes and sprays. If disinfectants are unavailable, prepare diluted bleach solution as described on page 1 and use in their place.

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Common touch points and surfaces include but are not limited to:

*Arms on chairs *Table tops *Doorknobs and handles *Countertops *Elevator Buttons *Coffee Pots

*Refrigerator, microwave, dishwasher, toaster handles *Water Dispensers *Cabinet and file drawer knobs and handles

*Phone receivers, keypads *Copier, printer, and fax control buttons *Sink faucets *Light switches

*Shared office supplies such as staplers, paper cutters, scissors, packaging tape dispensers, writing utensils *Vehicle handles, tailgates, etc.

If personnel are showing possible symptoms of or have been in recent direct contact with others showing symptoms of coronavirus, stop work and notify the site supervisor and HR.

Visit the CDC webpage on cleaning and disinfecting procedures: CDC Guidance for Community and Residential Cleaning-Disinfection for Coronavirus

A list of approved disinfectants for use against COVID-19, is available here: US EPA List of Disinfectants Effective Against Coronaviruses.

Special Considerations:

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-6A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MJA

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1030	NP	11.64	0.00	19.04	14.1	Yes	Yes	Yes	Yes		Weather: Sl. cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1035	11.65	0.5	7.72	23.0	4400	1.9	-137.3	20.1	Clear / colorless / odor	*Low-flow groundwater sample:*
	1037	11.65	1.0	7.67	22.5	4410	1.5	-137.5	17.6		(A) peristaltic pump w/ ded tubing
	1040	11.65	1.5	7.64	22.3	4390	1.4	-137.9	13.6		B) ded bladder pump
	1042	11.65	2.0	7.61	22.1	4400	1.4	-138.3	10.8		C) non-ded bladder pump; or
	1045	11.65	2.5	7.60	22.0	4380	1.5	-138.8	9.7		*Standard groundwater sample:*
	1047	11.65	3.0	7.59	21.9	4380	1.5	-139.1	7.3		D) bailer due to limited column; or
	1050	11.65	3.5	7.58	21.8	4380	1.6	-139.5	6.7		E) recovery well cycling sample
	1052	11.65	4.0	7.57	21.7	4380	1.6	-139.7	6.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, ML Juliet, TN
6-16-20	1055	MW-6A	11.65	7.57	21.7	4380	1.6	-139.7	6.5	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-6B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MBG

(2)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1115	NP	1147	0.00	52.28	47.3	Yes	Yes	Yes	Yes		Weather: Sunny, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-6B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-85
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDM

(3)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1810	8.82	8.95	0.13	20.34	NS	Yes	Yes	Yes	Yes		Weather: Clear 86°

Well Purging Record

*Removed oil-sorbent sock + allowed well to equilibrate prior to sampling

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		Not	Sampled	due to	presence of			C) non-ded bladder pump; or
			2.5			LNAPL					*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-85								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-86
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MMG (4)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1800	NP	8.30	0.00	19.21	17.21	Yes	Yes	Yes	Yes		
6-17-20	1350	NP	8.26	0.00								Weather: Clear 90's

Well Purging Record

* Removed oil-sorbent sock and allowed well to equilibrate prior to sampling

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1355	8.39	0.5	7.03	27.3	6870	2.7	-352.6	>200	Cloudy / black tint / strong	Low-flow groundwater sample:
	1357	8.46	1.0	7.01	25.3	6800	1.7	-355.1	93.6	odor / black particles	(A) peristaltic pump w/ ded tubing
	1400	8.53	1.5	6.99	24.8	6990	1.2	-357.4	83.6	Clear / black tint / strong	B) ded bladder pump
	1402	8.64	2.0	6.97	24.1	7100	1.2	-360.2	56.3	odor / black particles	C) non-ded bladder pump; or
	1405	8.70	2.5	6.97	23.7	7110	1.2	-361.4	54.7	↓	Standard groundwater sample:
	1407	8.74	3.0	6.96	23.6	7110	1.2	-362.0	54.1	Clear / Yellow tint /	D) bailer due to limited column; or
	1410	8.79	3.5	6.96	23.6	7080	1.2	-365.0	53.7	strong odor / black particles	E) recovery well cycling sample
↓	1412	8.83	4.0	6.96	23.6	7110	1.2	-366.1	51.7	↓	F) irrigation well grab sample
										* Sheen	

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1415	MW-86	8.83	6.96	23.6	7110	1.2	-366.1	51.7	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-120
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(5)

Initials: MDK

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1120	ND	10.67	0.00	28.00	17.5	Yes	Yes	Yes	Yes	\	Weather: Cloudy, 80°F

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1125	10.93	0.5	7.52	23.5	7926	2.1	-140.3	12.7	Clear / colorless	Low-flow groundwater sample:
↓	1127	10.93	1.0	7.49	23.6	8180	1.8	-141.4	10.4	↓	(A) peristaltic pump w/ ded tubing
↓	1130	10.93	1.5	7.46	22.9	8120	1.6	-142.9	9.8	↓	B) ded bladder pump
↓	1132	10.93	2.0	7.45	22.8	8100	1.5	-145.7	9.1	↓	C) non-ded bladder pump; or
↓	1135	10.93	2.5	7.43	22.7	8080	1.5	-146.2	7.6	↓	Standard groundwater sample:
↓	1138	10.93	3.0	7.42	22.6	8040	1.4	-146.7	7.2	↓	D) bailer due to limited column; or
↓	1140	10.93	3.5	7.41	22.5	8040	1.4	-147.2	6.3	↓	E) recovery well cycling sample
	1142	10.93	4.0	7.41	22.5	7990	1.4	-148.5	6.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6-16-20	1145	mw-120	10.93	7.41	22.5	7990 (7990)	1.4	-148.5	6.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-121
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB (6)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1205	NP	9.83	0.00	27.31	17.5	Yes	Yes	Yes	Yes		Weather: sl. cloudy 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1210	9.95	0.5	7.63	22.6	5720	2.1	-67.2	26.1	Clear / colorless	Low-flow groundwater sample:
↓	1212	10.03	1.0	7.59	22.3	5680	1.7	-60.0	23.4	↓	(A) peristaltic pump w/ ded tubing
	1215	10.07	1.5	7.55	22.1	5670	1.6	-53.1	20.7		B) ded bladder pump
	1217	10.09	2.0	7.53	21.8	5660	1.5	-45.8	15.3		C) non-ded bladder pump; or
	1220	10.10	2.5	7.51	21.7	5660	1.5	-42.0	12.7		Standard groundwater sample:
	1222	10.11	3.0	7.50	21.4	5660	1.5	-38.2	10.0		D) bailer due to limited column; or
	1225	10.12	3.5	7.50	21.4	5650	1.4	-35.7	9.7		E) recovery well cycling sample
↓	1227	10.13	4.0	7.47	21.3	5640	1.4	-33.6	8.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1230	MW-121	10.13	7.47	21.3	5640	1.4	-33.6	8.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-84
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MJB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1755	NP	9.44	0.00	20.56	15.2	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 90's
6-17-20	1305	NP	9.46	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1310	9.55	0.5	7.21	24.0	9810	3.2	-120.4	19.6	Clear/Yellow tint	Low-flow groundwater sample:
	1312	9.59	1.0	7.19	23.4	9970	2.4	-119.2	16.3		(A) peristaltic pump w/ ded tubing
	1315	9.62	1.5	7.18	22.5	10090	1.9	-118.3	12.7		B) ded bladder pump
	1317	9.65	2.0	7.18	22.2	10130	1.5	-118.1	9.3		C) non-ded bladder pump; or
	1320	9.67	2.5	7.18	22.0	10140	1.5	-118.2	8.6		Standard groundwater sample:
	1322	9.69	3.0	7.17	22.0	10120	1.4	-118.7	8.1		D) bailer due to limited column; or
	1325	9.71	3.5	7.16	22.1	10090	1.4	-118.4	7.8		E) recovery well cycling sample
	1327	9.74	4.0	7.16	22.1	10140	1.4	-117.6	7.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1330	MW-84	9.74	7.16	22.1	10140	1.4	-117.6	7.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-122
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB

(8)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1330	NP	9.36	0.00	23.32	18.4	Yes	Yes	Yes	Yes		
6-17-20	915	NP	8.72	0.00								Weather: Clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	920	9.40	0.5	7.32	21.7	10340	2.3	-109.2	89.2	Clear/colorless/with small	Low-flow groundwater sample:
	922	9.47	1.0	7.29	20.6	10780	1.9	-107.6	75.6	orange particles	(A) peristaltic pump w/ ded tubing
	925	9.53	1.5	7.29	20.0	9550	1.6	-94.2	67.3		B) ded bladder pump
	927	9.60	2.0	7.27	19.8	8920	1.5	-83.7	61.8		C) non-ded bladder pump; or
	930	9.64	2.5	7.26	19.8	8590	1.5	-77.6	57.3		Standard groundwater sample:
	932	9.68	3.0	7.25	19.7	8410	1.4	-77.9	55.2		D) bailer due to limited column; or
	935	9.71	3.5	7.25	19.7	8370	1.4	-78.1	53.6		E) recovery well cycling sample
	937	9.74	4.0	7.24	19.6	8290	1.4	-83.6	52.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	940	MW-122	9.74	7.24	19.6	8290	1.4	-83.6	52.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-81
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB

(9)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1735	NP	9.25	0.00	18.62	13.7	Yes	Yes	Yes	Yes		
6-17-20	1000	NP	9.20	0.00								Weather: Clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1005	9.24	0.5	7.56	22.5	6166	2.1	23.0	12.6	Clear/colorless	*Low-flow groundwater sample:*
↓	1007	9.36	1.0	7.43	21.8	6120	1.9	26.3	10.8	↓	(A) peristaltic pump w/ ded tubing
	1010	9.40	1.5	7.34	21.2	6090	1.8	27.6	9.6		B) ded bladder pump
	1012	9.43	2.0	7.34	20.9	6060	1.6	31.5	8.3		C) non-ded bladder pump; or
	1015	9.46	2.5	7.31	20.8	6040	1.5	33.6	7.6		*Standard groundwater sample:*
	1017	9.49	3.0	7.29	20.8	6020	1.5	35.7	6.4		D) bailer due to limited column; or
	1020	9.52	3.5	7.27	20.8	6000	1.5	36.8	5.7		E) recovery well cycling sample
↓	1022	9.55	4.0	7.26	20.8	5990	1.5	38.3	5.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1025	MW-81	9.55	7.26	20.8	5990	1.5	38.3	5.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-80
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(10)

Initials: RCDS

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1740	NP	7.34	0.00	19.69	14.7	Yes	Yes	Yes	Yes		Weather: Clear 90's
6-17-20	1045	NP	7.33	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1050	7.43	0.5	7.44	21.5	6080	2.9	52.8	17.6	Clear/colorless	Low-flow groundwater sample:
	1052	7.47	1.0	7.36	20.5	6090	2.2	32.6	14.8		(A) peristaltic pump w/ ded tubing
	1055	7.48	1.5	7.33	20.0	6090	1.9	32.4	11.1		B) ded bladder pump
	1057	7.49	2.0	7.32	19.7	6100	1.7	27.8	9.4		C) non-ded bladder pump; or
	1100	7.49	2.5	7.30	19.5	6100	1.5	26.1	7.3		Standard groundwater sample:
	1102	7.49	3.0	7.27	19.3	6090	1.4	19.2	7.1		D) bailer due to limited column; or
	1105	7.49	3.5	7.24	19.2	6080	1.4	16.0	7.0		E) recovery well cycling sample
	1107	7.49	4.0	7.23	19.3	6070	1.4	13.0	6.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1110	MW-80	7.49	7.23	19.3	6070	1.4	13.0	6.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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+EB-EP-04
(Same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-79
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDS

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1745	NP	9.18	0.00	19.24	15.0	Yes	Yes	Yes	Yes		Weather: Clear 90's
6-17-20	1130	NP	9.12	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1135	9.30	0.5	7.24	22.1	8980	1.9	-55.6	11.7	Clear / colorless	*Low-flow groundwater sample:*
↓	1137	9.33	1.0	7.18	21.7	9040	1.8	-56.2	10.6	↓	(A) peristaltic pump w/ ded tubing
	1140	9.35	1.5	7.17	20.5	9060	1.8	-58.3	9.3		B) ded bladder pump
	1142	9.38	2.0	7.15	20.3	9080	1.7	-57.2	8.4		C) non-ded bladder pump; or
	1145	9.40	2.5	7.13	20.0	9070	1.6	-56.0	6.2		*Standard groundwater sample:*
	1147	9.43	3.0	7.12	20.0	9070	1.5	-56.7	5.4		D) bailer due to limited column; or
	1150	9.45	3.5	7.11	20.0	9070	1.5	-57.2	4.7		E) recovery well cycling sample
↓	1152	9.47	4.0	7.10	20.0	9070	1.5	-57.9	4.3	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1155	MW-79	9.47	7.10	20.0	9070	1.5	-57.9	4.3	Per COC	Per COC	
↓												
↓	1210	EB-EP-04	NA	→						Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-82
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(12)

Initials: MMB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1750	NP	8.51	0.00	20.02	15.0	Yes	Yes	Yes	Yes		Weather: Clear 90's
6-17-20	1220	NP	8.46	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1225	8.94	0.5	7.50	24.0	7380	2.0	-147.8	9.2	Clear / colorless	Low-flow groundwater sample:
	1227	8.95	1.0	7.43	22.8	7330	1.8	-147.9	8.4		(A) peristaltic pump w/ ded tubing
	1230	8.95	1.5	7.40	22.6	7310	1.7	-148.2	6.2		B) ded bladder pump
	1232	8.95	2.0	7.39	22.2	7290	1.6	-148.6	5.7		C) non-ded bladder pump; or
	1235	8.95	2.5	7.38	22.3	7270	1.5	-149.3	5.1		Standard groundwater sample:
	1237	8.95	3.0	7.37	22.3	7290	1.5	-149.7	4.3		D) bailer due to limited column; or
	1240	8.95	3.5	7.36	22.2	7280	1.4	-150.3	4.1		E) recovery well cycling sample
	1242	8.95	4.0	7.36	22.2	7280	1.4	-150.7	3.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1245	MW-82	8.95	7.36	22.2	7280	1.4	-150.7	3.5	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+EB-EP-01 + Trip Blank-EP-04
(Same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-74
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(13)

Initials: MVA

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1250	NP	8.60	0.00	20.19	14.8	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1255	8.70	0.5	7.49	22.4	10300	1.8	70.7	7.9	Clear / colorless	Low-flow groundwater sample:
↓	1257	8.74	1.0	7.46	21.5	10410	1.5	70.5	7.1	↓	(A) peristaltic pump w/ ded tubing
	1300	8.76	1.5	7.36	21.3	10420	1.5	70.1	7.0		B) ded bladder pump
	1302	8.76	2.0	7.30	21.6	10440	1.4	69.3	6.3		C) non-ded bladder pump; or
	1305	8.76	2.5	7.27	20.8	10430	1.3	68.4	5.7		Standard groundwater sample:
	1307	8.76	3.0	7.24	20.7	10420	1.3	67.7	5.5		D) bailer due to limited column; or
	1310	8.76	3.5	7.21	20.6	10430	1.3	66.1	4.9		E) recovery well cycling sample
↓	1312	8.76	4.0	7.19	20.6	10430	1.3	65.5	4.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1315	MW-74	8.76	7.19	20.6	10430	1.3	65.5	4.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓												
↓	1330	EB-EP-01	NA	→						Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-73
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(14)

Initials: MJB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1345	NP	9.15	0.00	19.60	14.6	Yes	Yes	Yes	Yes		Weather: Clear 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1350	9.19	0.5	7.50	22.1	11910	1.9	-72.1	21.1	Clear / colorless	*Low-flow groundwater sample:*
	1352	9.20	1.0	7.46	21.9	11880	1.7	-75.4	17.5		(A) peristaltic pump w/ ded tubing
	1355	9.20	1.5	7.43	21.6	11870	1.5	-76.0	15.4		B) ded bladder pump
	1357	9.20	2.0	7.39	21.1	11860	1.5	-76.1	15.1		C) non-ded bladder pump; or
	1400	9.20	2.5	7.37	20.8	11880	1.4	-75.6	14.7		*Standard groundwater sample:*
	1402	9.20	3.0	7.35	20.5	11880	1.4	-74.2	13.6		D) bailer due to limited column; or
	1405	9.20	3.5	7.34	20.4	11860	1.3	-75.5	13.3		E) recovery well cycling sample
	1407	9.20	4.0	7.33	20.4	11860	1.3	-75.7	12.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1420	MW-73	9.20	7.33	20.4	11860	1.3	-75.7	12.9	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-2A
Event: iH2O
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB

15

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1715	NP	8.02	0.00	17.30	15.0	Yes	Yes	Yes	Yes		Weather: Clear 80's
6-17-20	830	NP	7.97	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	835	8.19	0.5	7.61	20.9	5500	2.2	-123.5	9.7	Clear/colorless	*Low-flow groundwater sample:*
	837	8.25	1.0	7.56	20.7	5410	1.7	-124.3	9.2		(A) peristaltic pump w/ ded tubing
	840	8.31	1.5	7.50	20.5	5350	1.4	-126.4	8.6		B) ded bladder pump
	842	8.34	2.0	7.49	20.4	5270	1.3	-126.1	7.3		C) non-ded bladder pump; or
	845	8.37	2.5	7.47	20.3	5190	1.4	-125.7	6.4		*Standard groundwater sample:*
	847	8.39	3.0	7.46	20.2	5140	1.4	-125.5	6.3		D) bailer due to limited column: or
	850	8.42	3.5	7.45	20.3	5070	1.6	-125.2	5.6		E) recovery well cycling sample
	852	8.45	4.0	7.44	20.3	5040	1.4	-124.9	5.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	855	MW-2A	8.45	7.44	20.3	5040	1.4	-124.9	5.1	Per COC	Per COC	Lab: Pace National, Mt Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-2B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(16)

Initials: KGA

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-1-20	1720	NP	9.95	0.00	52.00	NS	Yes	Yes	Yes	Yes		Weather: Cl

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								~~Low-flow groundwater sample:~~
			1.0								~~A) peristaltic pump w/ ded tubing~~
			1.5								~~B) ded bladder pump~~
			2.0								~~C) non-ded bladder pump; or~~
			2.5								~~Standard groundwater sample:~~
			3.0								~~D) bailer due to limited column; or~~
			3.5								~~E) recovery well cycling sample~~
			4.0								~~F) irrigation well grab sample~~

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-2B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-72
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(17)

Initials: MDB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1625	NP	6.65	0.00	13.93	11.9	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1630	6.89	0.5	7.22	23.9	11590	2.6	18.0	14.9	Clear / colorless	*Low-flow groundwater sample:*
	1632	6.90	1.0	7.11	22.4	11520	2.1	27.0	13.6		(A) peristaltic pump w/ ded tubing
	1635	6.90	1.5	7.07	22.0	11470	1.5	30.1	12.1		B) ded bladder pump
	1637	6.90	2.0	7.03	21.6	11440	1.4	32.6	10.7		C) non-ded bladder pump; or
	1640	6.90	2.5	7.00	21.0	11410	1.4	33.9	6.2		*Standard groundwater sample:*
	1642	6.90	3.0	6.98	21.0	11400	1.4	25.6	5.9		D) bailer due to limited column; or
	1645	6.90	3.5	6.97	20.9	11380	1.4	21.3	5.1		E) recovery well cycling sample
	1647	6.90	4.0	6.96	20.8	11370	1.4	20.6	4.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6-16-20	1650	MW-72	6.90	6.96	20.8	11370	1.4	20.6	4.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-6
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

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Initials MDB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1540	NP	7.51	0.00	26.69	21.6	Yes	Yes	Yes	Yes		Weather: Clear 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1545	7.66	0.5	7.27	21.5	15600	1.9	-79.7	35.2	Clear/colorless/orange particles	Low-flow groundwater sample:
	1547	7.66	1.0	7.21	21.1	14870	1.7	-79.2	27.6		(A) peristaltic pump w/ ded tubing
	1550	7.66	1.5	7.18	20.8	14100	1.6	-78.6	16.3		B) ded bladder pump
	1552	7.66	2.0	7.12	20.6	13760	1.4	-78.2	12.4		C) non-ded bladder pump; or
	1555	7.66	2.5	7.10	20.2	13180	1.4	-78.3	8.7		Standard groundwater sample:
	1557	7.66	3.0	7.09	20.0	13010	1.4	-78.5	6.3		D) bailer due to limited column; or
	1600	7.66	3.5	7.08	19.8	12940	1.3	-78.3	5.4		E) recovery well cycling sample
	1602	7.66	4.0	7.07	19.7	12910	1.3	-78.4	4.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1605	OCD-6	7.66	7.07	19.7	12910	1.3	-78.4	4.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD - 7AR
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB

(19)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1445	NP	6.35	0.00	21.28	16.0	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1450	6.56	0.5	7.26	23.8	13000	2.4	-139.2	18.7	Clear / Colorless	*Low-flow groundwater sample:*
	1452	6.60	1.0	7.24	23.4	13000	1.9	-140.6	18.1		(A) peristaltic pump w/ ded tubing
	1455	6.62	1.5	7.21	23.1	13000	1.6	-141.3	16.3		B) ded bladder pump
	1457	6.65	2.0	7.18	22.9	12990	1.4	-142.0	12.7		C) non-ded bladder pump; or
	1500	6.67	2.5	7.17	22.5	13050	1.3	-142.6	10.4		*Standard groundwater sample:*
	1502	6.70	3.0	7.16	22.2	13020	1.3	-143.2	9.7		D) bailer due to limited column; or
	1505	6.73	3.5	7.15	22.3	13010	1.3	-144.9	9.0		E) recovery well cycling sample
✓	1507	6.76	4.0	7.14	22.3	12950	1.3	-145.1	8.6	✓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1510	OCD-7AR	6.76	7.14	22.3	12950	1.3	-145.1	8.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-7B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MGM

(20)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1525	NP	6.46	0.00	56.85	51.9	Yes	Yes	Yes	Yes		Weather: Clear 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		OCD-7B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-7C
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDG

(21)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1530	ND	7.99	0.00	71.95	NS	Yes	Yes	Yes	Yes		Weather: Clear 90°F

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		OCD-7C								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Annually- bagged tube + guidance device

Monitoring Well Purging and Sampling Record

(Tool Co. locks gate by 5:00 PM)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#15C
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Vault ✓	Other ✓	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(22)

Initials: MOB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	940	18.71	18.99	0.28	22.30	20.0	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		Not sampled due to presence						C) non-ded bladder pump; or
			2.5			of LNAPL ≥ 0.03'					*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
		RW-#15C								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-48
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDM

(23)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	935	20.79	20.82	0.03	32.00	26.9	Yes	Yes	*Issue	Yes		Weather:

* At-grade plug missing, At grade pad cracked per 1419 : completion needs complete re-do

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5		Not sampled due to presence						B) ded bladder pump
			2.0		of LNAPL	20.03					C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-48								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW - 130
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDS / BRH (24)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	930	NP	22.49	0.00	45.00	37.4	Yes	Yes	Yes	Yes		Weather: Sunny, 100
6-17-20	1345	NP	22.47	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1350	22.53	0.5	6.91	26.0	2440	2.8	-78.7	17.2	colorless, clear	*Low-flow groundwater sample:*
↓	1353	22.54	1.0	6.79	24.9	2440	2.4	-67.3	14.9	↓	(A) peristaltic pump w/ ded tubing
	1355	22.54	1.5	6.74	24.6	2440	2.1	-48.5	10.8		B) ded bladder pump
	1358	22.54	2.0	6.71	24.2	2430	1.9	-40.3	9.7		C) non-ded bladder pump; or
	1400	22.54	2.5	6.69	23.9	2430	1.8	-37.2	9.3		*Standard groundwater sample:*
	1403	22.54	3.0	6.68	23.8	2430	1.7	-35.0	8.8		D) bailer due to limited column; or
	1405	22.54	3.5	6.68	23.7	2420	1.6	-33.9	8.7		E) recovery well cycling sample
↓	1408	22.54	4.0	6.67	23.7	2420	1.6	-32.8	8.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1410	MW-130	22.54	6.67	23.7	2420	1.6	-32.8	8.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-4
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB

(25)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	950	26.39	28.10	1.71	41.75	31.7	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy, 70°F

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5		Not	Sampled	due to	presence			B) ded bladder pump
			2.0		of	LNAPL					C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-4								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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(Gauge to top of 1-in galvanized pipe)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-19
Event: 1420
Area of Concern: REST

Completion:	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC __
Upright __	4-in __	SS __
Vault ✓	Other ✓	Other ✓

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: MDB (26)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1000	27.25	27.30	0.05	NM	10' off	Yes	Yes	Yes	Yes		Weather: Sl. Cloudy 70's
						base as needed						

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5			Not Sampled due	to presence				B) ded bladder pump
			2.0			of LNAPL	≥ 0.03'				C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-19								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-76
Event: IH20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (27)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1625	NP	10.31	0.00	20.33	16.0	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1300	NP	10.29	0.00								Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1305	10.34	0.5	6.86	23.9	7220	2.9	-196.1	9.7	colorless/clear	*Low-flow groundwater sample:*
↓	1307	10.34	1.0	6.84	23.1	7200	2.2	-199.1	8.9	↓	(A) peristaltic pump w/ ded tubing
	1310	10.34	1.5	6.83	23.0	7190	2.0	-199.5	8.1		B) ded bladder pump
	1312	10.34	2.0	6.82	22.8	7190	1.9	-200.1	7.5		C) non-ded bladder pump; or
	1315	10.34	2.5	6.82	22.7	7180	1.9	-201.5	7.2		*Standard groundwater sample:*
	1317	10.34	3.0	6.81	22.7	7180	1.8	-201.8	6.9		D) bailer due to limited column; or
	1320	10.34	3.5	6.81	22.8	7170	1.8	-202.3	6.5		E) recovery well cycling sample
	1322	10.34	4.0	6.81	22.8	7170	1.8	-202.5	6.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1325	MW-76	10.34	6.81	22.8	7170	1.8	-202.5	6.1	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-77
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (28)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1630	NP	8.60	0.00	20.52	15.2	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1345	NP	8.54	0.00								Pt. Cloudy 100's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1350	8.68	0.5	6.99	24.5	7780	3.2	-158.4	10.2	Gold tint / clear	*Low-flow groundwater sample:*
↓	1352	8.70	1.0	6.94	23.9	7890	2.4	-164.1	8.1	odor	(A) peristaltic pump w/ ded tubing
	1355	8.72	1.5	6.91	23.5	7910	2.1	-169.2	7.5		B) ded bladder pump
	1357	8.73	2.0	6.89	23.3	7940	2.0	-172.5	7.0		C) non-ded bladder pump; or
	1400	8.74	2.5	6.87	23.2	7960	1.9	-174.1	6.5		*Standard groundwater sample:*
	1402	8.74	3.0	6.86	23.2	7970	1.9	-176.2	6.1		D) bailer due to limited column; or
	1405	8.74	3.5	6.86	23.1	7970	1.8	-177.3	5.9		E) recovery well cycling sample
↓	1407	8.74	4.0	6.85	23.1	7980	1.8	-177.4	5.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1410	MW-77	8.74	6.85	23.1	7980	1.8	-177.4	5.5	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-78
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (29)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1635	NP	8.69	0.00	19.57	14.6	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1430	NP	8.64	0.00								Pt. Cloudy 100's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1435	8.72	0.5	7.20	22.4	4580	2.9	-72.8	7.5	Gold tint / clear	*Low-flow groundwater sample:*
↓	1437	8.79	1.0	7.14	21.7	4510	2.2	-70.4	6.7	↓	(A) peristaltic pump w/ ded tubing
↓	1440	8.84	1.5	7.08	21.5	4470	2.0	-68.2	6.1	↓	B) ded bladder pump
↓	1442	8.88	2.0	7.06	21.3	4450	1.9	-67.2	5.7	↓	C) non-ded bladder pump; or
↓	1445	8.92	2.5	7.05	21.2	4430	1.9	-66.9	5.4	↓	*Standard groundwater sample:*
↓	1447	8.96	3.0	7.05	21.2	4420	1.8	-65.8	5.1	↓	D) bailer due to limited column; or
↓	1450	9.00	3.5	7.04	21.1	4420	1.8	-65.5	4.9	↓	E) recovery well cycling sample
↓	1452	9.04	4.0	7.04	21.1	4410	1.8	-65.1	4.7	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1455	MW-78	9.04	7.04	21.1	4410	1.8	-65.1	4.7	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-75
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (30)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1640	NP	8.71	0.00	23.74	18.4	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1515	NP	8.66	0.00								Pt. Cloudy 100's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1520	8.69	0.5	7.30	23.4	7450	2.1	-155.3	15.1	colorless/clear	*Low-flow groundwater sample:*
	1522	8.70	1.0	7.28	22.1	7420	1.6	-156.9	12.9		(A) peristaltic pump w/ ded tubing
	1525	8.70	1.5	7.26	21.9	7380	1.3	-159.3	10.2		B) ded bladder pump
	1527	8.70	2.0	7.25	21.7	7360	1.2	-161.2	9.8		C) non-ded bladder pump; or
	1530	8.70	2.5	7.25	21.6	7350	1.2	-163.9	9.1		*Standard groundwater sample:*
	1532	8.70	3.0	7.24	21.6	7350	1.1	-165.1	8.9		D) bailer due to limited column; or
	1535	8.70	3.5	7.24	21.5	7340	1.1	-166.2	8.7		E) recovery well cycling sample
	1537	8.70	4.0	7.24	21.5	7340	1.1	-166.8	8.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/17/20	1540	MW-75	8.70	7.24	21.5	7340	1.1	-166.8	8.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-83
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (31)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1645	NP	8.56	0.00	19.91	15.6	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1215	NP	8.50	0.00								Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1220	8.59	0.5	6.91	23.9	6320	2.5	-5.7	11.9	colorless/clear	*Low-flow groundwater sample:*
	1222	8.64	1.0	6.85	23.5	6410	2.1	-14.8	10.1		(A) peristaltic pump w/ ded tubing
	1225	8.65	1.5	6.83	23.1	6510	1.9	-33.8	9.5		B) ded bladder pump
	1227	8.65	2.0	6.82	22.9	6520	1.7	-39.1	9.0		C) non-ded bladder pump; or
	1230	8.65	2.5	6.82	22.8	6530	1.6	-42.8	8.6		*Standard groundwater sample:*
	1232	8.65	3.0	6.81	22.8	6530	1.6	-45.9	8.1		D) bailer due to limited column; or
	1235	8.65	3.5	6.81	22.8	6540	1.5	-47.1	7.9		E) recovery well cycling sample
	1237	8.65	4.0	6.81	22.7	6540	1.5	-49.2	7.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1240	MW-83	8.65	6.81	22.7	6540	1.5	-49.2	7.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ Dup-EP-03 (Same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-3
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (32)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1650	NP	10.58	0.00	22.10	18.1	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1115	NP	10.53	0.00								Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1120	10.58	0.5	7.09	24.4	8170	3.3	-71.0	10.1	colorless/clear	Low-flow groundwater sample:
↓	1122	10.59	1.0	7.06	22.7	7480	2.7	-48.6	9.5	↓	(A) peristaltic pump w/ ded tubing
↓	1125	10.59	1.5	7.04	22.0	7180	2.2	-33.9	8.9	↓	B) ded bladder pump
↓	1127	10.59	2.0	7.03	21.9	7000	2.0	-24.8	8.2	↓	C) non-ded bladder pump; or
↓	1130	10.59	2.5	7.02	21.8	6910	1.9	-20.9	7.9	↓	Standard groundwater sample:
↓	1132	10.59	3.0	7.02	21.8	6890	1.9	-18.1	7.5	↓	D) bailer due to limited column; or
↓	1135	10.59	3.5	7.01	21.7	6880	1.8	-17.9	6.9	↓	E) recovery well cycling sample
↓	1137	10.59	4.0	7.01	21.7	6870	1.8	-17.5	6.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1140	MW-3	10.59	7.01	21.7	6870	1.8	-17.5	6.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓	1100	Dup-EP-03	10.59	7.01	21.7	6870	1.8	-17.5	6.0	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-88
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (33)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1700	NP	9.00	0.00	20.31	14.8	Yes	Yes	Yes	Yes	Issue	Weather: Pt. Cloudy 90's

Well Purging Record

4 Issues with pad; hole in west side of pad well remain functional

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1705	9.05	0.5	7.19	22.9	7290	2.2	-159.9	13.2	colorless/clear w/ orange particles	*Low-flow groundwater sample:*
	1707	9.06	1.0	7.15	22.6	7250	1.9	-155.8	11.5		(A) peristaltic pump w/ ded tubing
	1710	9.06	1.5	7.12	22.4	7210	1.7	-152.1	9.5		B) ded bladder pump
	1712	9.06	2.0	7.10	22.2	7180	1.5	-150.9	8.9		C) non-ded bladder pump; or
	1715	9.06	2.5	7.09	22.1	7160	1.4	-147.2	8.0		*Standard groundwater sample:*
	1717	9.06	3.0	7.08	22.1	7150	1.4	-145.9	7.5		D) bailer due to limited column; or
	1720	9.06	3.5	7.08	22.1	7150	1.3	-144.3	7.1		E) recovery well cycling sample
	1722	9.06	4.0	7.07	22.0	7160	1.3	-144.0	6.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1725	MW-88	9.06	7.07	22.0	7160	1.3	-144.0	6.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

+ Dup-EP-02 (same analysis)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-22A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (34)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1745	NP	8.12	0.00	22.65	17.4	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	1000	NP	8.09	0.00								Pt. Cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1005	8.15	0.5	6.96	21.8	15,530	3.1	-31.7	9.5	colorless/clear	Low-flow groundwater sample:
↓	1007	8.21	1.0	6.94	20.8	15,890	2.5	-33.6	8.6	↓	(A) peristaltic pump w/ ded tubing
↓	1010	8.24	1.5	6.93	20.5	15,950	2.1	-32.3	8.1	↓	B) ded bladder pump
↓	1012	8.27	2.0	6.93	20.3	15,980	2.0	-33.4	7.5	↓	C) non-ded bladder pump; or
↓	1015	8.28	2.5	6.92	20.2	16,000	1.9	-33.9	7.0	↓	Standard groundwater sample:
↓	1017	8.29	3.0	6.92	20.2	16,010	1.9	-34.2	6.8	↓	D) bailer due to limited column; or
↓	1020	8.29	3.5	6.92	20.1	16,010	1.8	-34.5	6.2	↓	E) recovery well cycling sample
↓	1022	8.30	4.0	6.91	20.1	16,020	1.8	-34.8	6.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1025	MW-22A	8.30	6.91	20.1	16,020	1.8	-34.8	6.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓	1000	Dup-EP-02	8.30	6.91	20.1	16,020	1.8	-34.8	6.0	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-22B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (35)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1748	NP	7.72	0.00	54.66	49.7	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy, 90's
6/17/20	1100	NP	7.70	0.00								Pt. Cloud, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-22B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-10
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1751	NP	5.80	0.00	18.45	13.3	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	915	NP	5.76	0.00								Pt. Cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	920	5.77	0.5	6.99	21.6	7020	2.9	-157.8	8.9	colorless/clear w/ orange particles	Low-flow groundwater sample:
↓	922	5.78	1.0	6.95	20.7	6920	2.4	-134.0	7.5	↓	(A) peristaltic pump w/ ded tubing
↓	925	5.78	1.5	6.94	20.6	6870	2.2	-123.1	7.1	↓	B) ded bladder pump
↓	927	5.78	2.0	6.93	20.4	6830	2.1	-118.5	6.8	↓	C) non-ded bladder pump; or
↓	930	5.78	2.5	6.92	20.3	6820	2.1	-115.1	6.5	↓	Standard groundwater sample:
↓	932	5.78	3.0	6.92	20.3	6810	2.0	-113.8	6.3	↓	D) bailer due to limited column; or
↓	935	5.78	3.5	6.92	20.2	6810	2.0	-112.5	5.9	↓	E) recovery well cycling sample
↓	937	5.78	4.0	6.91	20.2	6800	2.0	-111.9	5.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	940	MW-10	5.78	6.91	20.2	6800	2.0	-111.9	5.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-123
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (37)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1755	NP	6.34	0.00	25.71	25.0	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's
6/17/20	830	NP	6.32	0.00								Pt. Cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	835	6.33	0.5	7.02	20.3	8030	3.2	-187.6	9.8	colorless/clear	Low-flow groundwater sample:
↓	837	6.33	1.0	6.97	19.6	7670	2.8	-174.5	7.5	↓	(A) peristaltic pump w/ ded tubing
	840	6.33	1.5	6.94	19.2	7460	2.5	-156.1	7.1		B) ded bladder pump
	842	6.33	2.0	6.93	19.1	7320	2.1	-133.9	6.8		C) non-ded bladder pump; or
	845	6.33	2.5	6.92	19.1	7290	1.9	-129.5	6.2		Standard groundwater sample:
	847	6.33	3.0	6.92	19.0	7270	1.8	-125.3	6.0		D) bailer due to limited column; or
	850	6.33	3.5	6.91	19.0	7260	1.8	-123.1	5.8		E) recovery well cycling sample
	852	6.33	4.0	6.91	19.0	7250	1.7	-121.5	5.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	855	MW-123	6.33	6.91	19.0	7250	1.7	-121.5	5.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-4A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (38)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1530	NP	10.82	0.00	16.55	Well Base	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1535	10.83	0.5	7.18	23.4	5510	3.0	-154.9	11.5	colorless/clear w/	Low-flow groundwater sample:
	1537	10.83	1.0	7.12	22.9	5580	2.4	-160.2	10.5	black particles	(A) peristaltic pump w/ ded tubing
	1540	10.83	1.5	7.10	22.7	5620	2.2	-165.9	9.8		B) ded bladder pump
	1542	10.83	2.0	7.08	22.6	5650	2.1	-167.2	9.1		C) non-ded bladder pump; or
	1545	10.83	2.5	7.07	22.6	5670	2.1	-169.2	8.5		Standard groundwater sample:
	1547	10.83	3.0	7.07	22.5	5680	2.0	-171.8	8.1		D) bailer due to limited column; or
	1550	10.83	3.5	7.06	22.5	5690	2.0	-173.4	7.3		E) recovery well cycling sample
	1552	10.83	4.0	7.06	22.5	5690	2.0	-175.2	7.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1555	MW-4A	10.83	7.06	22.5	5690	2.0	-175.2	7.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-4B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (39)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Labs.	Other	Comments
6/16/20	1615	NP	10.60	0.00	72.37	67.4	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-4B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

+EB-EP-03 (Same analysis)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-5A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (40)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1425	NP	8.55	0.00	20.15	14.8	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1430	8.61	0.5	7.27	22.9	11,610	2.7	-110.5	11.3	clear/colorless w/ orange particles	Low-flow groundwater sample:
	1432	8.61	1.0	7.18	22.5	11,690	2.1	-113.9	9.5		(A) peristaltic pump w/ ded tubing
	1435	8.61	1.5	7.14	22.3	11,720	1.9	-115.9	9.1		B) ded bladder pump
	1437	8.61	2.0	7.10	22.2	11,750	1.8	-116.1	8.6		C) non-ded bladder pump; or
	1440	8.61	2.5	7.09	22.2	11,770	1.8	-116.3	8.0		Standard groundwater sample:
	1442	8.61	3.0	7.09	22.1	11,780	1.7	-116.9	7.7		D) bailer due to limited column; or
	1445	8.61	3.5	7.08	22.1	11,780	1.7	-117.2	7.3		E) recovery well cycling sample
	1447	8.61	4.0	7.08	22.1	11,790	1.7	-117.5	6.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1450	mw-5A	8.61	7.08	22.1	11,790	1.7	-117.5	6.9	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
	1505	EB-EP-03	NA							Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-5B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (41)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1515	NP	5.08	0.00	53.54	48.5	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-5B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-5C
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (42)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1520	NP	8.25	0.00	71.64	66.6	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-5C								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+Dup-EP-01
(Same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-7A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (43)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1320	NP	8.74	0.00	18.65	13.6	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1325	8.84	0.5	7.29	21.7	10,120	2.5	-99.7	12.9	Clear / colorless	*Low-flow groundwater sample:*
	1327	8.85	1.0	7.26	21.4	10,050	2.0	-102.8	10.3		(A) peristaltic pump w/ ded tubing
	1330	8.85	1.5	7.24	21.0	9,970	1.7	-105.9	9.8		B) ded bladder pump
	1332	8.85	2.0	7.23	20.9	9,940	1.5	-108.9	9.1		C) non-ded bladder pump; or
	1335	8.85	2.5	7.23	20.9	9,910	1.4	-110.5	8.7		*Standard groundwater sample:*
	1337	8.85	3.0	7.22	21.0	9,890	1.4	-112.3	8.3		D) bailer due to limited column; or
	1340	8.85	3.5	7.22	21.0	9,880	1.3	-113.4	7.9		E) recovery well cycling sample
	1342	8.85	4.0	7.23	21.0	9,870	1.3	-113.9	7.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1345	MW-7A	8.85	7.23	21.0	9,870	1.3	-113.9	7.5	Per COC	Per COC	
	1200	Dup-EP-01	8.85	7.23	21.0	9,870	1.3	-113.9	7.5	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-7B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (44)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1415	NS	8.52	0.00	52.56	47.6	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-7B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

+ Trip Blank - EP-02

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-8A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (45)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1225	NP	8.85	0.00	20.74	16.4	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1230	8.90	0.5	7.13	22.2	17960	3.2	-131.2	10.4	Clear/colorless	*Low-flow groundwater sample:*
	1232	9.05	1.0	7.08	21.8	18,050	2.3	-137.5	9.5		(A) peristaltic pump w/ ded tubing
	1235	9.12	1.5	7.04	21.6	18,180	2.0	-140.2	8.9		B) ded bladder pump
	1237	9.17	2.0	7.02	21.5	18,410	1.9	-143.8	8.1		C) non-ded bladder pump; or
	1240	9.19	2.5	7.02	21.5	18,490	1.9	-145.9	7.5		*Standard groundwater sample:*
	1242	9.20	3.0	7.01	21.4	18,520	1.8	-146.2	7.1		D) bailer due to limited column; or
	1245	9.21	3.5	7.01	21.4	18,530	1.8	-146.6	6.8		E) recovery well cycling sample
	1247	9.21	4.0	7.01	21.4	18,540	1.8	-146.9	6.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1250	OCD-8A	9.21	7.01	21.4	18,540	1.8	-146.9	6.3	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-8B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCD (46)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1310	NP	7.98	0.00	56.65	51.7	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		OCD-8B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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DO NOT ADDRESS AT ALL IN 1H20

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-P4
Event: 1H20
Area of Concern: REST

Completion:	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH (47)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20					30.26	22.8						
												Weather:

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-P4								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-25
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH (48)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1240	NP	12.82	0.00	28.18	23.2	Yes	Yes	Yes	Yes		Weather: Sunny, 80s
6-17-20	845	NP	12.84	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	850	13.14	0.5	7.58	21.3	3680	2.4	47.1	7.9	colorless, clear	*Low-flow groundwater sample:*
↓	853	13.16	1.0	7.46	20.0	3740	2.3	48.0	6.8	↓	(A) peristaltic pump w/ ded tubing
	855	13.17	1.5	7.39	19.3	3690	2.0	45.6	6.2		B) ded bladder pump
	858	13.18	2.0	7.36	19.1	3640	1.9	41.9	5.4		C) non-ded bladder pump; or
	900	13.18	2.5	7.34	19.0	3570	1.8	39.6	4.9		*Standard groundwater sample:*
	903	13.18	3.0	7.32	18.9	3550	1.7	37.2	4.6		D) bailer due to limited column; or
	905	13.18	3.5	7.31	18.8	3540	1.7	35.1	4.2		E) recovery well cycling sample
↓	908	13.18	4.0	7.30	18.8	3530	1.6	34.4	3.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	910	MW-25	13.18	7.30	18.8	3530	1.6	34.4	3.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-8
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BiZH

(49)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1245	NP	11.15	0.00	>14.95	NS	Yes	Issue	Yes	Yes	Issue (Paint)	Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		As historically noted:						A) peristaltic pump w/ ded tubing
			1.5		• PVC riser added in 1H19.						B) ded bladder pump
			2.0		• well to be P&A pending HW3						C) non-ded bladder pump; or
			2.5		approval per SESI. If not, a						*Standard groundwater sample:*
			3.0		new pad will need to be installed						D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-1R
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BLZH (50)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1250	NP	9.04	0.00	20.63	15.6	Yes	Issue	Yes	Yes		Weather: Sunny, 80s
6-17-20	935	NP	9.05	0.00								

↳ casing lid is bent making closure difficult. well still locks & is functional.

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	940	9.21	0.5	7.40	20.7	5580	2.6	-103.3	7.9	colorless, clear	*Low-flow groundwater sample:*
	943	9.21	1.0	7.43	19.1	5520	2.2	-106.7	7.0		(A) peristaltic pump w/ ded tubing
	945	9.21	1.5	7.44	18.6	5500	2.0	-109.2	6.4		B) ded bladder pump
	948	9.21	2.0	7.37	18.4	5470	1.9	-111.7	5.2		C) non-ded bladder pump; or
	950	9.21	2.5	7.31	18.3	5450	1.8	-113.5	4.9		*Standard groundwater sample:*
	953	9.21	3.0	7.28	18.2	5440	1.6	-115.0	4.3		D) bailer due to limited column; or
	955	9.21	3.5	7.26	18.2	5430	1.5	-116.1	3.7		E) recovery well cycling sample
	958	9.21	4.0	7.25	18.2	5420	1.5	-116.9	3.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1000	MW-1R	9.21	7.25	18.2	5420	1.5	-116.9	3.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-15
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

(51)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1255	NP	9.63	0.00	21.70	17.7	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
6-17-20	1020	NP	9.63	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1025	9.67	0.5	7.56	23.0	4480	2.2	36.6	7.9	colorless, clear	*Low-flow groundwater sample:*
↓	1028	9.67	1.0	7.48	20.8	4390	2.0	35.1	7.2	↓	(A) peristaltic pump w/ ded tubing
	1030	9.67	1.5	7.43	20.1	4350	1.9	34.5	6.7		B) ded bladder pump
	1033	9.67	2.0	7.40	19.7	4330	1.8	32.9	6.1		C) non-ded bladder pump; or
	1035	9.67	2.5	7.38	19.5	4320	1.7	30.7	5.8		*Standard groundwater sample:*
	1038	9.67	3.0	7.36	19.4	4280	1.7	29.6	5.3		D) bailer due to limited column; or
	1040	9.67	3.5	7.35	19.3	4270	1.6	27.5	4.9		E) recovery well cycling sample
↓	1043	9.67	4.0	7.34	19.3	4270	1.6	25.8	4.7	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1045	MW-15	9.67	7.34	19.3	4270	1.6	25.8	4.7	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ Trip Blank - EP-03

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-1R
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/DJD (52)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1305	NP	9.50	0.00	23.74	18.4	Yes	Yes	Yes	Yes		Weather: Clear 90's
6-17-20	1350	NP	9.41	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1355	9.64	0.5	7.25	28.6	6190	2.4	-38.7	12.6	Colorless / Clear	Low-flow groundwater sample:
	1358	9.64	1.0	7.21	28.9	6180	2.1	-35.8	10.5		(A) peristaltic pump w/ ded tubing
	1300	9.64	1.5	7.18	28.6	6170	1.8	-33.5	9.8		B) ded bladder pump
	1403	9.64	2.0	7.15	28.4	6150	1.6	-32.5	9.2		C) non-ded bladder pump; or
	1405	9.64	2.5	7.13	28.1	6130	1.5	-31.8	8.7		Standard groundwater sample:
	1407	9.64	3.0	7.10	27.8	6110	1.5	-30.7	8.2		D) bailer due to limited column; or
	1410	9.64	3.5	7.09	27.5	6090	1.4	-29.5	7.8		E) recovery well cycling sample
	1413	9.64	4.0	7.08	27.3	6070	1.3	-28.5	7.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1415	OCD-1R	9.64	7.08	27.3	6070	1.3	-28.5	7.5	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-2A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/OJD (53)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1310	NP	9.16	0.00	27.56	22.3	Yes	Yes	Yes	Yes		Weather: Clear 80s
6-17-20	1300	NP	9.10	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1305	9.28	0.5	7.36	27.3	7650	2.7	-64.5	13.8	colorless/clear	*Low-flow groundwater sample:*
↓	1308	9.28	1.0	7.21	26.9	6980	2.4	-41.7	11.8	↓	(A) peristaltic pump w/ ded tubing
	1310	9.28	1.5	7.18	26.5	6950	2.2	-38.6	9.6		B) ded bladder pump
	1312	9.28	2.0	7.15	26.3	6920	2.2	-31.7	9.5		C) non-ded bladder pump; or
	1315	9.28	2.5	7.12	26.2	6880	2.1	-25.6	7.8		*Standard groundwater sample:*
	1318	9.28	3.0	7.12	25.9	6860	2.1	-21.8	6.4		D) bailer due to limited column; or
	1320	9.28	3.5	7.11	25.7	6890	2.1	-20.9	6.1		E) recovery well cycling sample
	1323	9.28	4.0	7.10	25.3	6810	2.1	-19.5	5.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1325	OCD-2A	9.28	7.10	25.3	6810	2.1	-19.5	5.1	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-2B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

54

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1315	NAP	10.50	0.00	50.38	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		OCD-2B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-3
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/OSD (55)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1340	NP	9.78	0.00	25.20	20.2	Yes	Yes	Yes	Yes		Weather: Clear 80's
6-17-20	1120	NP	9.71	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1125	9.88	0.5	7.75	28.7	5330	3.3	-23.5	9.6	Colorless/clear	Low-flow groundwater sample:
	1127	9.88	1.0	7.66	28.2	4360	2.9	-21.4	9.2		(A) peristaltic pump w/ ded tubing
	1130	9.88	1.5	7.58	27.6	4070	2.6	-18.5	8.6		B) ded bladder pump
	1132	9.88	2.0	7.52	27.2	3970	2.3	-16.8	8.3		C) non-ded bladder pump; or
	1135	9.88	2.5	7.48	26.9	3920	2.3	-15.7	7.6		Standard groundwater sample:
	1137	9.88	3.0	7.41	26.5	3870	2.2	-14.5	6.5		D) bailer due to limited column; or
	1140	9.88	3.5	7.39	26.5	3820	2.1	-13.6	6.3		E) recovery well cycling sample
	1142	9.88	4.0	7.35	26.3	3810	2.1	-11.7	5.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1145	OCD-3	9.88	7.35	26.3	3810	2.1	-11.7	5.3	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-4
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/DSD (56)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1345	NP	9.35	0.00	25.41	20.1	Yes	Yes	Yes	Yes		Weather: Clear 80s
6-17-20	1030	NP	9.29	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1035	9.42	0.5	7.29	27.6	11940	3.8	-37.5	10.7	Colorless/Clear	Low-flow groundwater sample:
	1037	9.42	1.0	7.25	27.3	12310	3.2	-32.6	9.8		(A) peristaltic pump w/ ded tubing
	1040	9.42	1.5	7.21	26.8	12330	3.0	-28.4	9.5		B) ded bladder pump
	1042	9.42	2.0	7.18	26.5	12340	2.9	-25.6	9.1		C) non-ded bladder pump; or
	1045	9.42	2.5	7.15	26.2	12360	2.8	-23.8	8.6		Standard groundwater sample:
	1048	9.42	3.0	7.14	26.1	12380	2.6	-21.7	8.1		D) bailer due to limited column; or
	1050	9.42	3.5	7.13	25.8	13100	2.5	-20.8	7.8		E) recovery well cycling sample
✓	1053	9.42	4.0	7.12	25.4	13120	2.4	-19.5	7.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1055	OCD-4	9.42	7.12	25.4	13120	2.4	-19.5	7.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-11A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/OSD (57)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1325	NP	8.18	0.00	22.01	17.0	Yes	Yes	Yes	Yes		Weather Clear 80's
6-17-20	1210	NP	8.12	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1215	8.29	0.5	6.91	28.7	16430	3.1	-57.8	5.8	Colorless/clear w/ orange particles	Low-flow groundwater sample:
	1218	8.31	1.0	6.88	28.2	16420	2.7	-52.7	5.4		(A) peristaltic pump w/ ded tubing
	1220	8.31	1.5	6.81	27.6	16310	2.5	-50.6	5.1		B) ded bladder pump
	1223	8.31	2.0	6.75	27.5	16290	2.5	-49.8	4.7		C) non-ded bladder pump; or
	1225	8.31	2.5	6.72	27.2	16270	2.4	-42.3	4.8		Standard groundwater sample:
	1228	8.31	3.0	6.68	27.1	16250	2.3	-40.9	3.7		D) bailer due to limited column; or
	1230	8.31	3.5	6.61	26.8	16210	2.3	-39.7	3.3		E) recovery well cycling sample
	1232	8.31	4.0	6.59	26.7	16190	2.2	-38.5	2.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1235	mw-11A	8.31	6.59	26.7	16190	2.2	-38.5	2.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-11B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH (58)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1330	NP	7.98	0.00	47.30	42.3	Yes	Yes	Yes	Yes		Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-11B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: OCD-5
Event: 1420
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH/OSD (59)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1350	NP	7.61	0.00	25.41	20.6	Yes	Yes	Yes	Yes		Weather: Clear 80's
6-17-20	945	NP	7.58	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	950	7.60	0.5	6.93	25.2	11730	3.8	-76.4	86.5	Orange Tint/Cloudy	*Low-flow groundwater sample:*
	953	7.60	1.0	6.93	24.8	11720	3.3	-75.3	71.3		(A) peristaltic pump w/ ded tubing
	955	7.60	1.5	6.94	24.8	11690	3.1	-75.1	60.7		B) ded bladder pump
	957	7.60	2.0	6.95	24.7	11680	2.9	-74.9	46.8	sl. cloudy	C) non-ded bladder pump; or
	1000	7.60	2.5	6.96	24.6	11640	2.8	-73.2	43.8		*Standard groundwater sample:*
	1002	7.60	3.0	6.96	24.8	11640	2.8	-74.3	41.5		D) bailer due to limited column; or
	1005	7.60	3.5	6.96	24.7	11650	2.8	-76.3	39.4		E) recovery well cycling sample
	1007	7.60	4.0	6.96	24.7	11660	2.8	-77.8	37.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6-17-20	1010	OCD-5	7.60	6.96	24.7	11660	2.8	-77.8	37.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-87
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH (60)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1430	NP	7.99	0.00	20.39	15.1	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
↓	1520	NP	7.99	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1525	8.15	0.5	7.37	23.8	11,830	2.2	-78.2	9.1	colorless, clear	*Low-flow groundwater sample:*
	1528	8.19	1.0	7.32	22.3	11,760	1.7	-65.1	7.6		(A) peristaltic pump w/ ded tubing
	1530	8.23	1.5	7.28	21.9	11,690	1.5	-60.4	5.9		B) ded bladder pump
	1533	8.26	2.0	7.25	21.6	11,640	1.4	-57.9	4.8		C) non-ded bladder pump; or
	1535	8.29	2.5	7.22	21.4	11,620	1.3	-55.3	4.4		*Standard groundwater sample:*
	1538	8.32	3.0	7.21	21.3	11,590	1.2	-52.7	3.6		D) bailer due to limited column; or
	1540	8.35	3.5	7.20	21.2	11,580	1.2	-51.0	3.2		E) recovery well cycling sample
↓	1543	8.38	4.0	7.19	21.2	11,570	1.1	-50.3	2.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6-16-20	1545	MW-87	8.38	7.19	21.2	11,570	1.1	-50.3	2.9	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-18A
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

61

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1440	NP	8.41	0.00	22.58	17.9	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
↓	1605	NP	8.41	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1610	8.63	0.5	7.33	23.1	15,810	2.7	-175.4	6.9	colorless, clear	*Low-flow groundwater sample:*
↓	1613	8.70	1.0	7.29	20.9	15,700	2.0	-179.9	4.7	↓	(A) peristaltic pump w/ ded tubing
	1615	8.76	1.5	7.27	20.1	15,630	1.7	-182.3	3.9		B) ded bladder pump
	1618	8.80	2.0	7.24	19.8	15,590	1.5	-185.1	3.2		C) non-ded bladder pump; or
	1620	8.83	2.5	7.20	19.6	15,560	1.4	-187.0	2.4		*Standard groundwater sample:*
	1623	8.89	3.0	7.18	19.5	15,540	1.2	-188.3	2.1		D) bailer due to limited column; or
	1625	8.92	3.5	7.16	19.5	15,530	1.1	-189.2	1.9		E) recovery well cycling sample
↓	1628	8.95	4.0	7.15	19.4	15,510	1.1	-189.8	1.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6-16-20	1630	MW-18A	8.95	7.15	19.4	15,510	1.1	-189.8	1.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-18B
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

62

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1445	NP	8.42	0.00	50.59	45.6	Yes	Yes	Yes	Yes		Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-18B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

(Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-18T
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BZH

63

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1450	NP	8.53	0.00	50.57	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-18T								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-70
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH (64)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1500	NP	8.02	0.00	22.05	16.8	Yes	Yes	Yes	Yes		
↓	1735	NP	8.02	0.00								Weather: Sunny, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1740	8.09	0.5	7.22	23.3	6810	2.7	-106.3	17.2	Colorless, clear	*Low-flow groundwater sample:*
↓	1743	8.09	1.0	7.17	21.6	6490	2.4	-103.9	12.1	↓	(A) peristaltic pump w/ ded tubing
	1745	8.09	1.5	7.14	21.2	6270	2.2	-102.5	10.7		B) ded bladder pump
	1748	8.09	2.0	7.12	21.0	6110	2.1	-100.3	9.9		C) non-ded bladder pump; or
	1750	8.09	2.5	7.11	20.8	6040	2.0	-99.6	9.6		*Standard groundwater sample:*
	1753	8.09	3.0	7.10	20.7	6000	2.0	-97.2	9.0		D) bailer due to limited column; or
	1755	8.09	3.5	7.10	20.6	5980	1.9	-96.0	8.7		E) recovery well cycling sample
↓	1758	8.09	4.0	7.09	20.5	5970	1.9	-94.8	8.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1800	MW-70	8.09	7.09	20.5	5970	1.9	-94.8	8.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

+EB-EP-02 (same analysis)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-124
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

65

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1510	NP	8.92	0.00	22.00	17.0	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
↓	1645	NP	8.92	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1650	8.97	0.5	7.22	22.3	11,010	2.3	-127.8	87.2	cloudy, orange algae	Low-flow groundwater sample:
↓	1653	8.97	1.0	7.15	20.4	10,560	1.9	-120.2	67.9	particles	(A) peristaltic pump w/ ded tubing
	1655	8.97	1.5	7.12	19.8	10,420	1.7	-119.6	44.6	↓	B) ded bladder pump
	1658	8.97	2.0	7.11	19.4	10,340	1.6	-118.8	31.7		C) non-ded bladder pump; or
	1700	8.97	2.5	7.10	19.2	10,300	1.5	-117.3	23.6	clear, colorless w/	Standard groundwater sample:
	1703	8.97	3.0	7.10	19.0	10,270	1.5	-119.6	21.9	orange algae particles	D) bailer due to limited column; or
	1705	8.97	3.5	7.10	19.0	10,250	1.4	-121.4	20.7	↓	E) recovery well cycling sample
↓	1708	8.97	4.0	7.09	18.9	10,240	1.4	-122.9	20.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1710	MW-124	8.97	7.09	18.9	10,240	1.4	-122.9	20.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓	1725	EB-EP-02	NA	→	→	→	→	→	→	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Driveway near bldg. A/C unit

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-52
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

(66)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1120	NP	20.83	0.00	34.67	29.5	Yes	Yes	Yes	Yes		Weather: Pt. cloudy, 90s
6-17-20	1255	NP	20.84	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1300	20.87	0.5	7.25	24.4	2700	2.4	-229.6	9.2	colorless, clear	*Low-flow groundwater sample:*
	1303	20.87	1.0	7.14	22.6	2660	1.9	-221.2	8.1		(A) peristaltic pump w/ ded tubing
	1305	20.87	1.5	7.09	22.0	2640	1.7	-216.1	7.4		B) ded bladder pump
	1308	20.87	2.0	7.04	21.7	2610	1.4	-210.9	6.3		C) non-ded bladder pump; or
	1310	20.87	2.5	7.01	21.4	2590	1.3	-207.4	5.8		*Standard groundwater sample:*
	1313	20.87	3.0	6.99	21.3	2580	1.3	-205.2	5.0		D) bailer due to limited column; or
	1315	20.87	3.5	6.98	21.2	2570	1.4	-203.9	4.7		E) recovery well cycling sample
	1318	20.87	4.0	6.97	21.2	2560	1.4	-202.4	4.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1320	MW-52	20.87	6.97	21.2	2560	1.4	-202.4	4.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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E. side of blue bldg.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-109
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BZH

(67)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1115	NP	18.89	0.00	29.48	25.5	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
6-17-20	1210	NP	18.91	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxication-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1215	19.07	0.5	7.33	25.6	2570	2.0	-328.4	11.2	colorless, clear,	Low-flow groundwater sample:
	1218	19.12	1.0	7.27	24.3	2560	1.6	-339.2	9.8	odor	(A) peristaltic pump w/ ded tubing
	1220	19.15	1.5	7.21	23.6	2530	1.3	-353.1	9.2		B) ded bladder pump
	1223	19.18	2.0	7.14	23.2	2500	1.1	-368.2	8.1		C) non-ded bladder pump; or
	1225	19.20	2.5	7.09	23.0	2480	1.0	-374.0	7.0		Standard groundwater sample:
	1228	19.21	3.0	7.07	22.8	2470	0.9	-378.8	6.4		D) bailer due to limited column; or
	1230	19.22	3.5	7.05	22.7	2460	0.8	-381.3	5.9		E) recovery well cycling sample
	1233	19.22	4.0	7.04	22.6	2460	0.8	-383.5	5.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1235	MW-109	19.22	7.04	22.6	2460	0.8	-383.5	5.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW - 110
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1110	NP	15.45	0.00	29.74	24.7	Yes	Yes	Yes	Yes		Weather: Sunny, 90s
6-17-20	1125	NP	15.47	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1130	15.61	0.5	7.23	24.0	2080	2.2	-129.4	17.6	colorless, clear,	*Low-flow groundwater sample:*
↓	1133	15.66	1.0	7.21	22.2	1864	1.9	-128.2	14.9	odor	(A) peristaltic pump w/ ded tubing
	1135	15.68	1.5	7.20	21.6	1786	1.7	-126.9	12.2		B) ded bladder pump
	1138	15.69	2.0	7.20	21.4	1735	1.6	-123.5	9.8		C) non-ded bladder pump; or
	1140	15.70	2.5	7.19	21.3	1717	1.5	-121.9	9.4		*Standard groundwater sample:*
	1143	15.70	3.0	7.19	21.2	1709	1.4	-119.6	8.7		D) bailer due to limited column; or
	1145	15.70	3.5	7.19	21.2	1704	1.4	-117.2	8.3		E) recovery well cycling sample
↓	1148	15.70	4.0	7.18	21.2	1701	1.3	-115.8	7.5	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-17-20	1150	MW-110	15.70	7.18	21.2	1701	1.3	-115.8	7.5	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-13
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Located N. of river

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

(69)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-22	1155	NP	9.12	0.00	21.10	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-13								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-69
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Located N. of river

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1150	NP	7.79	0.00	22.51	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-69								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-12
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Located N. of river

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BZH

71

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1145	NP	6.52	0.00	17.93	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-12										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-24
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Located E. of river

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

(72)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1205	NP	8.61	0.00	23.51	NS	Yes	Yes	Issue	Yes		Weather: Sunny, 80s

↳ Broken hasp/hinge. Well has a lock but will not securely close.

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								Low-flow groundwater sample:
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								Standard groundwater sample:
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-24								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-14
Event: 1H20
Area of Concern: EP

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Located N. of river

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BRH

(73)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1210	NP	7.28	0.00	>11.81	NS	Yes	Yes (*Issue)	Yes	Yes		Weather Sunny, 80s

* Blockage @11.81' TOC, Probe will not pass.

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-14										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Bagged tube; Sample via part if RW is active

Monitoring Well Purging and Sampling Record

Navajo Refining Company — **Well:** RW-12R
Artesia Refinery — **Event:** 1H20
Artesia, New Mexico — **Area of Concern:** REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Above-grade Vault ✓	Other 12-in	Other __

(RW recently off due to water rights issue)

Hydrologic Monitoring for TRC Houston, Texas

Initials: RJM (74)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1540	NP	23.55	0.00	NM	Top of Pump	Yes	Yes	Yes	Yes		Weather: Sunny 90's
6.17.20	1510	NP	23.57	0.00		(if pump not operating)						

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1515	23.58	0.5	6.92	25.4	2750	1.3	-275.3	10.5	Clear / colorless	*Low-flow groundwater sample:*
	1517	23.59	1.0	6.90	25.4	2790	1.1	-279.1	9.7		(A) peristaltic pump w/ ded tubing
	1520	23.59	1.5	6.89	25.3	2810	1.0	-283.4	9.1		B) ded bladder pump
	1522	23.59	2.0	6.88	25.3	2840	0.9	-285.6	8.8		C) non-ded bladder pump; or
	1525	23.59	2.5	6.86	25.3	2850	0.9	-286.9	8.7		*Standard groundwater sample:*
	1527	23.59	3.0	6.85	25.2	2870	0.8	-288.2	7.2		D) bailer due to limited column; or
	1530	23.59	3.5	6.85	25.1	2880	0.8	-288.5	7.0		(E) recovery well cycling sample, if recovery pump on; or
	1532	23.59	4.0	6.84	25.1	2880	0.8	-289.3	6.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1535	RW-12R	23.59	6.84	25.1	2880	0.8	-289.3	6.9	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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+Dup - Rest - DI (same analyses)
+EB - Rest - DI (same analyses)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-113
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: ZB/BRA

75

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1544	NP	23.02	0.00	37.80	33.8	Yes	Yes	Yes	Yes		Weather: Cloudy, 100
6/17/20	1445	NP	23.01	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1450	23.04	0.5	6.79	24.6	2370	2.7	-123.9	6.8	colorless, clear,	*Low-flow groundwater sample:*
	1453	23.04	1.0	6.71	22.6	2340	2.2	-120.5	5.4	odor	(A) peristaltic pump w/ ded tubing
	1455	23.04	1.5	6.68	22.2	2330	2.0	-117.2	5.1		B) ded bladder pump
	1458	23.04	2.0	6.67	21.6	2320	1.9	-115.8	4.7		C) non-ded bladder pump; or
	1500	23.04	2.5	6.67	21.4	2320	1.8	-112.1	4.1		*Standard groundwater sample:*
	1503	23.04	3.0	6.66	21.3	2310	1.7	-109.3	3.9		D) bailer due to limited column; or
	1505	23.04	3.5	6.65	21.2	2310	1.6	-107.8	3.6		E) recovery well cycling sample
	1508	23.04	4.0	6.65	21.2	2310	1.6	-106.4	3.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1510	MW-113	23.04	6.65	21.2	2310	1.6	-106.4	3.2	Per COC	Per COC	
	1200	Dup-Rest-DI	23.04	6.65	21.2	2310	1.6	-106.4	3.2	same	same	
	1530	EB-Rest-DI	NA							same	same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-8
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BJ (76)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1547	20.80	20.89	0.09	35.80	30.8	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								
			1.0	Not Sampled			due to		LNAPL		*Low-flow groundwater sample:*
			1.5	Presence		>0.03'					(A) peristaltic pump w/ ded tubing
			2.0								B) ded bladder pump
			2.5								C) non-ded bladder pump; or
			3.0								*Standard groundwater sample:*
			3.5								D) bailer due to limited column; or
			4.0								E) recovery well cycling sample
											F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-8										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-22
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Above-grade Vault ✓	Other 12-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials BA

77

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/22	1549	24.64	30.33	5.69	NM	Sample port if RW active	Yes	Yes	Yes	Yes		Weather Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								
			1.0	Not sampled due to LNAPL presence ≥0.03'							*Low-flow groundwater sample:*
			1.5								A) peristaltic pump w/ ded tubing
			2.0								B) ded bladder pump
			2.5								C) non-ded bladder pump; or
			3.0								*Standard groundwater sample:*
			3.5								D) bailer due to limited column; or
			4.0								(E) recovery well cycling sample
											F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-22										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record (Historical LNAPL)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-20A
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Vault ✓	Other 6-in	Other __

metal roof canopy: RW-20A, Vault, RW-20B

Hydrologic Monitoring
for TRC
Houston, Texas

78

Initials: BT

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1553	17.52	17.63	0.11	NM *	Sample Port	Yes	Yes	Yes	Yes		Weather: Sunny 90's

* Likely well base @ 21.98' per Navajo

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0	Not Sampled			due	to	LNAPL		A) peristaltic pump w/ ded tubing
			1.5	presence		≥0.03'					B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								(E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		RW-20A								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record (Historical LNAPL)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-20B
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Vault ✓	Other 6-in	Other __

metal roof canopy • RW-20A - - - - - - - [] Vault • RW-20B

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

(79)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1557	17.53	17.66	0.13	NM	Sample Part	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0	Not sampled due to LNAPL presence ≥0.03'							A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								(E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		RW-20B								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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[Bagged / labeled tube stored inside above-grade vault]

Monitoring Well Purging and Sampling Record (Historical LNAPL)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-13R
Event: 1H20
Area of Concern: REST Above-grade

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Vault ✓	Other 12-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: B (80)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1601	22.01	24.21	2.20	NM	30.0	YES	Yes	Yes	Yes		Weather: Sunny 90's
						or Sample	part, if	RW is	active			

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								Low-flow groundwater sample:
			1.0	Not sampled due to LNAPL presence ≥0.03'							(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								Standard groundwater sample:
			3.0								D) bailer due to limited column; or
			3.5								or (E) recovery well cycling sample if RW is active
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-13R								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-14R
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Above-grade Vault ✓	Other 12-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (81)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1604	20.47	26.73	6.26	NM	Sample Port	Yes	Yes	Yes	YO		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0	not sampled due to presence of LNAPL >0.03'							A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								(E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		RW-14R								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-133
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BD

(82)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1607	19.72	20.18	0.46	37.64	27.9	Yes	Yes	Yes	YES		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5	Not sampled due to presence of LNAPL >0.03							*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-133								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+TB-Rest-01

+Dup-Rest-03 (same analyses)
+EB-Rest-03 (same analyses)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-134
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (83)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1610	NP	19.18	0.00	32.95	28.4	yes	yes	yes	yes		Weather: Sunny 90's
6.17.20	1315	NP	19.20	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1320	19.22	0.5	6.93	24.1	4240	3.6	51.3	8.8	Colorless / Clear	*Low-flow groundwater sample:*
	1322	19.22	1.0	6.92	24.0	4250	3.1	54.5	8.2		(A) peristaltic pump w/ ded tubing
	1325	19.23	1.5	6.92	23.9	4240	2.4	59.6	7.3		B) ded bladder pump
	1327	19.23	2.0	6.91	23.9	4230	2.2	61.6	6.5		C) non-ded bladder pump; or
	1330	19.23	2.5	6.90	23.9	4230	2.1	63.2	6.1		*Standard groundwater sample:*
	1332	19.23	3.0	6.89	23.8	4220	2.0	64.1	4.8		D) bailer due to limited column; or
	1335	19.23	3.5	6.89	23.8	4210	2.0	64.9	3.2		E) recovery well cycling sample
	1337	19.23	4.0	6.88	23.7	4200	1.9	65.7	2.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments (Lab: Pace National, Mt. Juliet, TN)
6.17.20	1340	MW-134	19.23	6.88	23.7	4200	1.9	65.7	2.7	Per COC	Per COC	
	1100	Dup-Rest-03	19.23	6.88	23.7	4200	1.9	65.7	2.7	Per COC	Per COC	
	1400	EB-Rest-03	NA							Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RA-4798
Event: 1H20
Area of Concern: REST

Irrigation well
Inside green, block bldg.
No purge; sample port (faucet)

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BD

(84)

Well Inspection Information (screen: 840-850)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/17/20	1605	NM	NM	NM	NM	NM	NA	NA	NA	Yes		Weather: Sunny 100's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5							colorless, clear	*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5		No purge; active water well w/ sample port						B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								(F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1605	RA-4798	NM	7.21	20.2	2196	3.9	-58.2	1.1	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
		(4798										

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RA-4196
Event: 1H20
Area of Concern: RESJ

Irrigation well
Inside green, block bldg.
No purge; Sample port (faucet)

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (Screen: 280-292)

Initials: BJ

(85)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/17/20	1550	NM	NM	NM	NM	NM	NA	NA	NA	Yes		Weather: Sunny 100s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5							Colorless, clear	*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5		No purge; active water well w/ Sample port						B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								(F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1550	RA-4196	NM	7.18	22.6	2238	3.2	-76.8	1.9	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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DO NOT ADDRESS
Removed from Program by Navajo, 4-13-15

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RA-1227
Event: 11420
Area of Concern: REST

Irrigation well
Removed from Program

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: (86)

Well Inspection Information (Screen: 194-246)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/17/20												Weather:

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								Low-flow groundwater sample:
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								Standard groundwater sample:
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

DO NOT ADDRESS

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
	RA-1227									Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RA-3156
Event: 1H20
Area of Concern: REST

[Irrigation well
No purge; sample port]

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (87)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/17/20	1520	NM	NM	NM	NM	NA	NA	NA	NA	Yes		Weather: Pty cldy 100's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5							Black / Cloudy	*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5		No purge; active water well w/ sample port						B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								(F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
												Lab: Pace National, Mt. Juliet, TN
6/17/20	1520	RA-3156	NM	7.00	20.7	1,703	2.3	-58.4	>200	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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E. of MW-101; across street

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RA-313
Event: 1H20
Area of Concern: REST

[Irrigation and water-supply purpose, per Navajo]

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information (Screen: 904-1157)

Initials: BS / RM (88)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/17/20	850	NM	NM	NM	NM	NA	NA	NA	NA	Yes		Weather Sunny 80°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5							Clear	*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5		No purge; active water well w/ sample port						B) ded bladder pump
			2.0		(By Tank 465)						C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								(F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	855	RA-313	NM	7.07	22.9	1789	2.9	53.7	2.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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(Pecan Grove)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-7
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (89)

Well Inspection Information

Date	Time	* Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1305	NP	19.71	0.00	34.83	30.6	Yes	Yes	Yes	Yes		Weather: Sunny 90's

* unmeasurable trace on probe (dark goldtint)

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1310	19.72	0.5	6.93	25.0	3395	3.5	-98.4	3.1	Colorless, clear	*Low-flow groundwater sample:*
	1313	19.72	1.0	6.88	23.3	3338	2.9	-113.7	3.0	" (strong HC odor)	A) peristaltic pump w/ ded tubing
	1315	19.72	1.5	6.86	22.1	3298	2.6	-120.6	2.8	" "	B) ded bladder pump
	1318	19.72	2.0	6.84	21.9	3289	2.4	-123.8	2.7	" "	C) non-ded bladder pump; or
	1320	19.72	2.5	6.83	21.7	3280	2.3	-125.4	2.6	" "	*Standard groundwater sample:*
	1323	19.72	3.0	6.83	21.6	3274	2.3	-126.7	2.5	" "	D) bailer due to limited column; or
	1325	19.72	3.5	6.82	21.6	3269	2.2	-127.3	2.5	" "	E) recovery well cycling sample
	1328	19.72	4.0	6.81	21.5	3265	2.2	-128.4	2.4	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1330	KWB-7	19.72	6.81	21.5	3265	2.2	-128.4	2.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-135
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: JS (90)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1730	NP	30.71	0.00	65.55	50.0	Yes	Yes	Yes	Yes		Weather: Sunny 90's
6/17/20	1355	NP	30.68	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1400	30.72	0.5	6.86	22.9	5399	4.4	75.8	13.8	Colorless, clear	*Low-flow groundwater sample:*
	1403	30.72	1.0	6.83	21.3	5436	3.3	80.2	11.6	" "	A) peristaltic pump w/ ded tubing
	1405	30.72	1.5	6.82	20.9	5449	2.9	82.3	10.4	" "	(B) ded bladder pump
	1408	30.72	2.0	6.82	20.7	5453	2.6	83.1	10.1	" "	C) non-ded bladder pump; or
	1410	30.72	2.5	6.82	20.6	5459	2.4	83.5	9.6	" "	*Standard groundwater sample:*
	1413	30.72	3.0	6.81	20.6	5462	2.3	84.1	9.4	" "	D) bailer due to limited column; or
	1415	30.72	3.5	6.81	20.5	5468	2.2	84.3	9.3	" "	E) recovery well cycling sample
	1418	30.72	4.0	6.81	20.5	5471	2.2	84.6	9.2	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/17/20	1420	MW-135	30.72	6.81	20.5	5471	2.2	84.6	9.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-20
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (91)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1621	NP	17.08	0.00	26.66	21.9	Yes	Yes	Yes	Yes		Weather: Sunny 90's
6.17.20	1210	NP	17.10	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1215	17.13	0.5	7.07	23.7	4140	3.1	47.3	10.3	Clear/Colorless	*Low-flow groundwater sample:*
	1217	17.15	1.0	7.04	23.7	4100	2.7	52.5	9.1		(A) peristaltic pump w/ ded tubing
	1220	17.16	1.5	7.01	23.6	4080	2.6	56.8	8.5		B) ded bladder pump
	1222	17.16	2.0	6.99	23.6	4030	2.4	58.1	8.2		C) non-ded bladder pump; or
	1225	17.16	2.5	6.98	23.5	4010	2.3	59.9	7.7		*Standard groundwater sample:*
	1227	17.17	3.0	6.97	23.5	4000	2.1	61.2	5.4		D) bailer due to limited column; or
	1230	17.17	3.5	6.97	23.5	3990	2.0	62.4	3.9		E) recovery well cycling sample
	1232	17.17	4.0	6.96	23.5	3990	2.0	63.1	3.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6.17.20	1235	MW-20	17.17	6.96	23.5	3990	2.0	63.1	3.1	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-3
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(92)

Initials: BJ

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1618	NP	19.02	0.00	21.59	NS	Yes	Yes	Yes	Yes		Weather: Sunny 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-3										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-4
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BJ (93)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1615	NP	31.43	0.00	36.98	NS	yes	yes	yes	yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-4								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-2
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BD

(94)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1625	NP	19.23	0.00	21.49	NS	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-2								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-1
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

(95)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1630	NP	18.18	0.00	21.88	19.6	yes	yes	yes	yes		Weather: Sunny 80's
6/17/20	915	NP	18.14	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	920	18.15	0.5	6.95	24.6	4171	2.4	-31.6	3.4	Colorless, clear	*Low-flow groundwater sample:*
	923	18.15	1.0	6.79	23.1	4150	2.3	-12.4	2.8	" "	(A) peristaltic pump w/ ded tubing
	925	18.15	1.5	6.74	22.8	4134	2.3	+05.8	2.3	" "	B) ded bladder pump
	928	18.15	2.0	6.71	22.6	4122	2.2	10.3	2.0	" "	C) non-ded bladder pump; or
	930	18.15	2.5	6.68	22.5	4103	2.2	16.2	1.8	" "	*Standard groundwater sample:*
	933	18.15	3.0	6.68	22.5	4096	2.1	18.3	1.6	" "	D) bailer due to limited column; or
	935	18.15	3.5	6.67	22.5	4093	2.0	18.9	1.6	" "	E) recovery well cycling sample
	938	18.15	4.0	6.67	22.5	4090	2.0	19.1	1.5	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	940	NP-1	18.15	6.67	22.5	4090	2.0	19.1	1.5	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-6
Event: 1420
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BT (96)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1634	NP	14.57	0.00	20.35	15.4	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-6								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-8
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (97)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1800	NP	15.87	0.00	23.30	18.3	yes	yes	yes	yes		Weather: Sunny 90's
6.17.20	1105	NP	15.89	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1110	15.90	0.5	6.99	23.6	4550	3.0	38.2	6.3	Clear / colorless	*Low-flow groundwater sample:*
	1112	15.90	1.0	6.98	23.5	4590	2.8	40.5	6.1		(A) peristaltic pump w/ ded tubing
	1115	15.91	1.5	6.98	23.5	4630	2.5	41.7	5.7		B) ded bladder pump
	1117	15.91	2.0	6.97	23.4	4680	2.3	42.3	5.7		C) non-ded bladder pump; or
	1120	15.91	2.5	6.96	23.4	4700	2.2	42.9	4.8		*Standard groundwater sample:*
	1122	15.91	3.0	6.96	23.4	4710	2.2	43.4	4.3		D) bailer due to limited column; or
	1125	15.91	3.5	6.95	23.3	4710	2.2	44.5	3.6		E) recovery well cycling sample
	1127	15.91	4.0	6.94	23.3	4720	2.1	45.1	3.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.17.20	1130	MW-8	15.91	6.94	23.3	4720	2.1	45.1	3.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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+ Trip Blank - TMD-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-21
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (98)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1752	NP	15.21	0.00	25.12	19.9	yes	yes	yes	yes		Weather: Sunny, 90's
6-17-20	1010	NP	15.22	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-17-20	1015	15.31	0.5	7.08	23.9	4900	2.4	25.3	5.4	Clear / Colorless	*Low-flow groundwater sample:*
	1017	15.32	1.0	7.05	23.9	4930	2.0	28.4	5.6		(A) peristaltic pump w/ ded tubing
	1020	15.32	1.5	7.04	23.8	4920	1.9	28.9	5.1		B) ded bladder pump
	1022	15.32	2.0	7.03	23.7	4930	1.8	29.1	4.3		C) non-ded bladder pump; or
	1025	15.32	2.5	7.03	23.7	4930	1.8	29.7	4.0		*Standard groundwater sample:*
	1027	15.33	3.0	7.02	23.7	4940	1.8	30.5	3.7		D) bailer due to limited column; or
	1030	15.33	3.5	7.01	23.6	4940	1.7	31.0	3.1		E) recovery well cycling sample
	1032	15.33	4.0	7.00	23.6	4950	1.7	31.8	2.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-17-20	1035	MW-21	15.33	7.00	23.6	4950	1.7	31.8	2.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-9
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (99)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
8/16/20	1735	NP	16.43	0.00	22.25	NS	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-9								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-71
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

(100)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1740	NP	16.63	0.00	21.67	16.9	Yes	Yes	Yes	Yes		Weather: Sunny 90's
6/17/20	1350	NP	16.61	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1355	16.63	0.5	7.23	22.5	5964	2.9	-25.6	6.2	colorless, clear	*Low-flow groundwater sample:*
	1358	16.63	1.0	7.10	21.6	5986	2.6	-31.7	4.8	" "	(A) peristaltic pump w/ ded tubing
	1400	16.63	1.5	7.03	20.8	6,013	2.2	-35.8	2.7	" "	B) ded bladder pump
	1403	16.63	2.0	7.00	20.6	6,026	1.9	-37.6	2.2	" "	C) non-ded bladder pump; or
	1405	16.63	2.5	6.98	20.5	6,041	1.7	-39.3	1.9	" "	*Standard groundwater sample:*
	1408	16.63	3.0	6.96	20.5	6,049	1.6	-39.8	1.7	" "	D) bailer due to limited column; or
	1410	16.63	3.5	6.95	20.4	6,054	1.6	-40.2	1.7	" "	E) recovery well cycling sample
	1413	16.63	4.0	6.94	20.4	6,059	1.5	-40.4	1.6	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1415	MW-71	16.63	6.94	20.4	6,059	1.5	-40.4	1.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-68
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (101)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1815	NP	21.09	0.00	26.52	23.5	Yes	Yes	Yes	Yes		Weather: Sunny 80's
6.17.20	915	NP	21.10	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	920	21.11	0.5	7.08	24.2	2820	2.3	-141.3	6.7	Clear / colorless	*Low-flow groundwater sample:*
	922	21.12	1.0	7.05	24.0	2820	2.1	-120.5	6.2		(A) peristaltic pump w/ ded tubing
	925	21.12	1.5	7.02	23.9	2810	1.9	-101.2	5.8		B) ded bladder pump
	927	21.12	2.0	7.00	23.9	2800	1.7	-92.7	5.7		C) non-ded bladder pump; or
	930	21.13	2.5	6.98	23.9	2800	1.6	-85.9	5.1		*Standard groundwater sample:*
	932	21.13	3.0	6.98	23.8	2790	1.4	-83.4	4.5		D) bailer due to limited column; or
	935	21.13	3.5	6.97	23.8	2780	1.4	-82.2	4.0		E) recovery well cycling sample
	937	21.13	4.0	6.96	23.8	2780	1.3	-81.9	3.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	940	MW-68	21.13	6.96	23.8	2780	1.3	-81.9	3.7	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-27
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (102)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/18/20	1708	NP	18.93	0.00	30.28	25.0	yes	yes	yes	yes		Weather: Sunny 90's
6/17/20	1300	NT	18.94	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1305	18.99	0.5	7.13	23.8	2011	3.2	-13.5	9.2	Colorless, Clear	*Low-flow groundwater sample:*
	1308	18.99	1.0	7.02	23.4	1987	2.5	-02.4	6.4	" "	(A) peristaltic pump w/ ded tubing
	1310	18.99	1.5	6.96	23.1	1,971	2.2	+4.8	5.1	" "	B) ded bladder pump
	1313	18.99	2.0	6.93	22.9	1,965	2.0	13.6	4.4	" "	C) non-ded bladder pump; or
	1315	18.99	2.5	6.92	22.7	1,961	1.9	15.8	4.1	" "	*Standard groundwater sample:*
	1318	18.99	3.0	6.91	22.7	1,957	1.8	17.2	3.9	" "	D) bailer due to limited column; or
	1320	18.99	3.5	6.91	22.6	1,952	1.8	17.8	3.7	" "	E) recovery well cycling sample
✓	1323	18.99	4.0	6.90	22.6	1,950	1.7	18.0	3.6	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1325	MW-27	18.99	6.90	22.6	1,950	1.7	18.0	3.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-89
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

(103)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1703	NP	12.62	0.00	20.28	15.2	Yes	Yes	Yes	Yes		Weather: Sunny 80's
6/17/20	1015	NP	12.62	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1020	12.66	0.5	7.04	20.4	3,543	3.4	76.2	9.7	Colorless, Clear	*Low-flow groundwater sample:*
	1023	12.66	1.0	6.93	20.3	3,476	3.1	71.3	9.3	" "	(A) peristaltic pump w/ ded tubing
	1025	12.67	1.5	6.91	20.2	3,438	2.8	68.4	5.9	" "	B) ded bladder pump
	1028	12.67	2.0	6.90	20.1	3,402	2.6	66.2	5.1	" "	C) non-ded bladder pump; or
	1030	12.67	2.5	6.90	20.0	3,391	2.5	65.9	4.7	" "	*Standard groundwater sample:*
	1033	12.67	3.0	6.89	19.9	3,387	2.4	65.4	4.4	" "	D) bailer due to limited column; or
	1035	12.67	3.5	6.89	19.9	3,384	2.4	65.1	4.2	" "	E) recovery well cycling sample
	1038	12.67	4.0	6.89	19.9	3,381	2.3	64.7	4.1	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1040	MW-89	12.67	6.89	19.9	3,381	2.3	64.7	4.1	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-16
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

(104)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1711	NP	9.66	0.00	21.24	16.2	Yes	Yes	Yes	Yes		Weather Sunny 80's
6/17/20	1110	NP	9.64	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1115	9.64	0.5	7.15	20.3	4905	2.6	81.4	10.7	Colorless, Clear	*Low-flow groundwater sample:*
	1118	9.64	1.0	6.99	19.4	4,880	2.0	82.7	9.5	" "	(A) peristaltic pump w/ ded tubing
	1120	9.64	1.5	6.94	19.0	4,864	1.7	83.1	5.8	" "	B) ded bladder pump
	1123	9.64	2.0	6.91	18.8	4,849	1.5	83.5	4.2	" "	C) non-ded bladder pump; or
	1125	9.64	2.5	6.88	18.7	4,842	1.4	83.9	3.3	" "	*Standard groundwater sample:*
	1128	9.64	3.0	6.87	18.6	4,839	1.4	84.1	3.0	" "	D) bailer due to limited column; or
	1130	9.64	3.5	6.86	18.6	4,835	1.3	84.5	2.8	" "	E) recovery well cycling sample
	1133	9.64	4.0	6.86	18.5	4,833	1.3	84.6	2.7	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1135	MW-16	9.64	6.86	18.5	4,833	1.3	84.6	2.7	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-26
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB

105

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1720	NP	7.76	0.00	27.58	22.6	Yes	Yes	Yes	Yes		Weather: Sunny 90's
6/17/20	1205	NP	7.76	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1210	7.81	0.5	7.37	20.4	6203	1.8	-58.2	5.9	Colorless, clear	*Low-flow groundwater sample:*
	1213	7.84	1.0	7.11	19.8	6,253	1.6	-41.6	3.6	" "	(A) peristaltic pump w/ ded tubing
	1215	7.85	1.5	7.07	19.4	6,261	1.4	-36.8	2.9	" "	B) ded bladder pump
	1218	7.85	2.0	7.04	19.2	6,270	1.2	-35.2	2.4	" "	C) non-ded bladder pump; or
	1220	7.85	2.5	7.01	19.1	6,279	0.9	-26.4	1.9	" "	*Standard groundwater sample:*
	1223	7.85	3.0	6.99	19.0	6,284	0.8	-23.8	1.7	" "	D) bailer due to limited column; or
	1225	7.85	3.5	6.97	18.9	6,287	0.7	-22.9	1.6	" "	E) recovery well cycling sample
	1228	7.85	4.0	6.96	18.9	6,290	0.7	-22.7	1.6	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1230	MW-26	7.85	6.96	18.9	6,290	0.7	-22.7	1.6	Per COC	Per COC	Lab: Pace National, ML Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

(Pecan grove access from 82 gate)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-11A
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BJJ (106)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1400	NP	20.14	0.00	42.27	37.0	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1405	20.16	0.5	6.92	23.4	4,180	2.2	-63.8	4.0	colorless, clear (HC odor)	Low-flow groundwater sample:
	1408	20.16	1.0	6.86	22.9	4,034	1.6	-79.4	3.1	" " "	(A) peristaltic pump w/ ded tubing
	1410	20.16	1.5	6.83	22.6	3,993	1.3	-84.8	2.6	" " "	B) ded bladder pump
	1413	20.16	2.0	6.81	22.5	3,985	1.1	-87.2	2.3	" " "	C) non-ded bladder pump; or
	1415	20.16	2.5	6.80	22.4	3,981	0.9	-89.3	2.1	" " "	Standard groundwater sample:
	1418	20.16	3.0	6.80	22.4	3,978	0.8	-90.1	2.0	" " "	D) bailer due to limited column; or
	1420	20.16	3.5	6.79	22.4	3,976	0.7	-90.8	2.0	" " "	E) recovery well cycling sample
	1423	20.16	4.0	6.78	22.3	3,974	0.7	-91.3	1.9	" " "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1425	KWB-11A	20.16	6.78	22.3	3,974	0.7	-91.3	1.9	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

(Pecan grove access from 82 gate)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-11B
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (107)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1450	NP	20.88	0.00	72.45	62.2	Yes	Yes	Yes	Yes	*	Weather: 90's Sunny

* (severely cracked pad same as last events, needs new pad)

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1455	20.92	0.5	7.24	23.4	3055	2.9	-53.9	4.7	Colorless, clear	*Low-flow groundwater sample:*
	1458	20.94	1.0	7.09	22.8	3,051	2.1	-41.2	4.1	" "	(A) peristaltic pump w/ ded tubing
	1500	20.95	1.5	7.01	22.3	3,046	1.7	-36.3	3.5	" "	B) ded bladder pump
	1503	20.95	2.0	6.96	22.1	3,041	1.5	-32.4	2.9	" "	C) non-ded bladder pump; or
	1505	20.95	2.5	6.93	21.9	3,039	1.3	-30.2	2.4	" "	*Standard groundwater sample:*
	1508	20.95	3.0	6.90	21.8	3,037	1.2	-29.6	2.2	" "	D) bailer due to limited column; or
	1510	20.95	3.5	6.88	21.7	3,036	1.1	-29.1	2.1	" "	E) recovery well cycling sample
	1513	20.95	4.0	6.87	21.7	3,034	1.1	-28.7	2.1	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1515	KWB-11B	20.95	6.87	21.7	3,034	1.1	-28.7	2.1	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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Removed from Program by Navajo, 4-13-15

Monitoring Well Purging and Sampling Record

(Former Jack Joy 575-365-6042)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-3AR
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(108)

Initials:

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
												Weather:

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

DO NOT ADDRESS

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
												Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

ATV- S. Ro Field

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-115
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (109)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	855	NP	16.18	0.00	27.50	19.8	yes	yes	yes	yes		Weather: 70's Sunny

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	900	16.21	0.5	6.94	20.5	4255	4.1	-29.8	2.0	colorless, clear	*Low-flow groundwater sample:*
	903	16.22	1.0	6.89	19.9	4181	3.5	+4.7	1.9	" "	(A) peristaltic pump w/ ded tubing
	905	16.22	1.5	6.86	19.8	4096	3.2	19.2	1.8	" "	B) ded bladder pump
	908	16.22	2.0	6.84	19.6	4054	3.0	22.8	1.8	" "	C) non-ded bladder pump; or
	910	16.22	2.5	6.83	19.5	4049	2.9	25.6	1.6	" "	*Standard groundwater sample:*
	913	16.22	3.0	6.83	19.5	4040	2.9	26.7	1.5	" "	D) bailer due to limited column; or
	915	16.22	3.5	6.82	19.4	4032	2.8	27.2	1.4	" "	E) recovery well cycling sample
	918	16.22	4.0	6.81	19.3	4027	2.8	27.5	1.4	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	920	MW-115	16.22	6.81	19.3	4027	2.8	27.5	1.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
		RO Fields Program (2020)										
	920	MW-115	16.22	6.81	19.3	4027	2.8	27.5	1.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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ATV - S. RO Field

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-114
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BB (110)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	955	NP	15.98	0.00	38.25	30.5	YES	YES	YES	YES		Weather: Ptly cloudy 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Curr. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1000	16.01	0.5	6.85	22.8	3362	3.9	38.4	4.3	Colorless, clear	*Low-flow groundwater sample:*
	1003	16.01	1.0	6.76	22.4	3334	3.1	47.9	3.4	" "	(A) peristaltic pump w/ ded tubing
	1005	16.01	1.5	6.73	22.1	3326	2.6	51.2	2.7	" "	B) ded bladder pump
	1008	16.01	2.0	6.71	22.0	3317	2.3	53.8	2.3	" "	C) non-ded bladder pump; or
	1010	16.01	2.5	6.70	22.0	3314	2.0	55.0	1.9	" "	*Standard groundwater sample:*
	1013	16.01	3.0	6.69	21.9	3312	1.8	55.6	1.7	" "	D) bailer due to limited column; or
	1015	16.01	3.5	6.69	21.9	3309	1.7	56.2	1.7	" "	E) recovery well cycling sample
	1018	16.01	4.0	6.68	21.9	3307	1.7	57.1	1.6	" "	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1020	MW-114	16.01	6.68	21.9	3307	1.7	57.1	1.6	Per COC	Per COC	
		RO Fields Program (2Q 20)										
	1020	MW-114	16.01	6.68	21.9	3307	1.7	57.1	1.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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ATV - S. RO Field (mesquite!!)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-125
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: BTB (111)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1030	NP	19.17	0.00	28.31	23.5	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1035	19.22	0.5	6.93	23.3	4263	3.8	18.4	10.2	Colorless ; clear	*Low-flow groundwater sample:*
↓	1037	19.24	1.0	6.89	22.4	4239	3.2	24.6	7.8	↓	(A) peristaltic pump w/ ded tubing
	1040	19.24	1.5	6.87	21.7	4198	2.8	32.3	6.3		B) ded bladder pump
	1042	19.24	2.0	6.84	21.3	4198	2.5	36.8	5.0		C) non-ded bladder pump; or
	1045	19.24	2.5	6.83	21.1	4186	2.3	40.6	4.1		*Standard groundwater sample:*
	1047	19.24	3.0	6.82	21.6	4183	2.2	41.9	3.9		D) bailer due to limited column; or
	1050	19.24	3.5	6.81	21.0	4181	2.1	42.6	3.9		E) recovery well cycling sample
	1052	19.24	4.0	6.81	20.9	4180	2.1	42.8	3.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1055	MW-125	19.24	6.81	20.9	4180	2.1	42.8	3.8	Per COC	Per COC	
↓												
		RO Fields Program (2020)										
↓	1055	MW-125	19.24	6.81	20.9	4180	2.1	42.8	3.8	per COC	per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-117
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: DSD (112)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1050	NP	14.65	0.00	27.22	19.7	yes	yes	yes	yes		Weather: Clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1055	14.66	0.5	6.77	21.1	3430	3.5	67.1	30.6	Colorless/slcloudy	Low-flow groundwater sample:
	1058	14.66	1.0	6.68	20.8	3410	3.1	70.2	29.3		(A) peristaltic pump w/ ded tubing
	1100	14.66	1.5	6.62	20.7	3350	3.1	72.1	26.8		B) ded bladder pump
	1103	14.66	2.0	6.57	20.6	3310	3.0	73.4	24.5		C) non-ded bladder pump; or
	1105	14.66	2.5	6.55	20.5	3260	2.9	74.2	23.1		Standard groundwater sample:
	1107	14.66	3.0	6.53	20.5	3240	2.8	75.1	21.7	Colorless/clear	D) bailer due to limited column; or
	1110	14.66	3.5	6.51	20.4	3230	2.7	75.7	20.7		E) recovery well cycling sample
	1113	14.66	4.0	6.48	20.3	3220	2.6	76.1	21.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1115	MW-117	14.66	6.48	20.3	3220	2.6	76.1	21.5	Per COC	Per COC	
		RO Fields Program (2020)										
		MW-117								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-118
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: OJO (113)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	955	NP	17.76	0.00	28.29	21.0	Yes	Yes	Yes	Yes		Weather: CLEAR 80'S

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1000	17.92	0.5	6.85	19.3	3350	4.8	71.2	41.6	Colorless/Cloudy	Low-flow groundwater sample:
	1003	17.98	1.0	6.72	18.9	3390	4.3	72.8	37.5		(A) peristaltic pump w/ ded tubing
	1005	18.03	1.5	6.66	18.6	3420	4.1	72.5	35.6		B) ded bladder pump
	1008	18.06	2.0	6.59	18.4	3340	3.9	73.1	32.1		C) non-ded bladder pump; or
	1010	18.08	2.5	6.51	18.4	3420	3.6	74.6	33.7	Colorless/Cloudy	Standard groundwater sample:
	1013	18.08	3.0	6.48	18.2	3400	3.5	75.3	31.5		D) bailer due to limited column; or
	1015	18.08	3.5	6.43	18.2	3430	3.5	75.7	28.4		E) recovery well cycling sample
	1018	18.08	4.0	6.41	18.2	3410	3.4	75.9	27.3	Colorless/Clear	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1020	MW-118	18.08	6.41	18.2	3410	3.4	75.9	27.3	Per COC	Per COC	
		RO Fields	Program	(2020)								
		MW-118								Per COC	per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-9
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: KDS

114

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1732	NP	16.78	0.00	25.65	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-9								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-119
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GDS (115)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	920	NP	16.02	0.00	28.11	20.8	Yes	Yes	Yes	Yes		Weather: Partly cloudy, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	925	16.09	0.5	7.47	21.6	6920	2.1	99.8	24.2	colorless / clear	*Low-flow groundwater sample:*
	927	16.10	1.0	7.22	20.4	6670	1.5	102.3	15.8		(A) peristaltic pump w/ ded tubing
	930	16.10	1.5	7.17	20.2	6550	1.3	105.6	11.6		B) ded bladder pump
	933	16.10	2.0	7.14	19.9	6510	1.4	107.3	10.2		C) non-ded bladder pump; or
	935	16.10	2.5	7.09	19.8	6480	1.4	106.7	8.9		*Standard groundwater sample:*
	937	16.10	3.0	7.07	19.7	6470	1.4	106.1	8.0		D) bailer due to limited column; or
	940	16.10	3.5	7.06	19.8	6470	1.4	105.7	7.4		E) recovery well cycling sample
	943	16.10	4.0	7.06	19.7	6470	1.4	105.3	7.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, MT Juliet, TN
6/16/20	945	MW-119	16.10	7.06	19.7	6470	1.4	105.3	7.1	Per COC	Per COC	
		RO Fields Program (2020)										
	945	MW-119								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NP-5
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GMS (116)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1554	NP	16.32	0.00	25.09	20.0	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		NP-5								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-136
Event: iH20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GX (117)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1601	NP	16.69	0.00	27.90	23.0	Yes	Yes	Yes	Yes		Weather: Sunny, 70's
6/17/20	850	NP	16.65	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	855	16.73	0.5	7.17	22.3	6620	2.3	76.2	42.9	colorless / sl. Cloudy	Low-flow groundwater sample:
	857	16.73	1.0	7.12	21.6	6410	1.5	82.0	34.1		(A) peristaltic pump w/ ded tubing
	900	16.73	1.5	7.08	21.4	6370	1.2	86.1	29.3		B) ded bladder pump
	903	16.73	2.0	6.99	21.3	6300	1.1	88.6	24.5	colorless / clear	C) non-ded bladder pump; or
	905	16.73	2.5	6.95	21.3	6300	1.0	89.3	20.9		Standard groundwater sample:
	907	16.73	3.0	6.96	21.2	6290	1.0	90.6	18.6		D) bailer due to limited column; or
	910	16.73	3.5	6.95	21.2	6290	1.0	92.0	17.9		E) recovery well cycling sample
	913	16.73	4.0	6.95	21.2	6280	1.0	93.2	17.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	915	mw-136	16.73	6.95	21.2	6280	1.0	93.2	17.1	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-126A
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GDS (118)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1440	NP	20.60	0.00	37.51	29.5	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1445	20.61	0.5	7.05	27.1	4880	2.3	-115.6	56.1	Colorless / sl. Cloudy	Low-flow groundwater sample:
↓	1447	20.61	1.0	6.97	25.4	4820	1.6	-119.4	59.6	↓	(A) peristaltic pump w/ ded tubing
	1450	20.61	1.5	6.91	24.3	4830	1.3	-125.2	39.9		B) ded bladder pump
	1453	20.61	2.0	6.90	23.9	4800	1.1	-127.9	28.7		C) non-ded bladder pump; or
	1455	20.61	2.5	6.91	23.6	4760	1.1	-130.8	18.3	Colorless / clear	Standard groundwater sample:
	1457	20.61	3.0	6.91	23.6	4720	1.0	-133.6	12.6	↓	D) bailer due to limited column; or
	1500	20.61	3.5	6.91	23.5	4680	1.1	-137.0	8.1		E) recovery well cycling sample
↓	1503	20.61	4.0	6.92	23.5	4650	1.1	-140.6	6.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1505	MW-126A	20.61	6.92	23.5	4650	1.1	-140.6	6.9	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-126B
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: ADS (119)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1400	NP	20.45	0.00	51.43	48.4	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1405	20.59	0.5	7.10	26.5	5300	2.0	93.2	11.0	Colorless / clear	*Low-flow groundwater sample:*
	1407	20.59	1.0	7.06	24.2	5730	1.3	96.8	7.1		(A) peristaltic pump w/ ded tubing
	1410	20.59	1.5	6.98	23.7	5850	1.2	99.0	4.4		B) ded bladder pump
	1413	20.59	2.0	6.92	23.1	5950	1.0	100.3	3.7		C) non-ded bladder pump; or
	1415	20.59	2.5	6.87	22.9	5970	1.0	101.1	3.1		*Standard groundwater sample:*
	1417	20.59	3.0	6.88	23.0	5980	1.0	101.9	3.6		D) bailer due to limited column; or
	1420	20.59	3.5	6.88	22.9	6010	1.0	102.7	3.2		E) recovery well cycling sample
	1423	20.59	4.0	6.87	22.8	6030	1.0	103.4	2.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1425	MW-126B	20.59	6.87	22.8	6030	1.0	103.4	2.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

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Monitoring Well Purging and Sampling Record

* No Sheen present

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-127
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: NSJ

(120)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1349	22.45	24.24	1.79	53.21	38.4	Yes	Yes	Yes	Yes		Weather: Sunny, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT	SAMPLED	due	to well			C) non-ded bladder pump; or
			2.5			having	LNAPL	Thickness			*Standard groundwater sample:*
			3.0			≥	0.03'				D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-127								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-129
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
~~Upright~~ ✓	4-in	SS
Vault	Other	Other

* well has been converted to at-grade completion.

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GAS

(121)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1340	23.17	24.08	0.91	~~53.08~~ 50.78	~~38.2~~ NA	Yes	* Yes	Yes	Yes		Weather: partly Cloudy, 80's

Well Purging Record

(Recompleted at-grade prior to 1H20 event)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT SAMPLED due to well						C) non-ded bladder pump; or
			2.5		having LNAPL thickness						*Standard groundwater sample:*
			3.0		≥ 0.03'						D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-129								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

Take photo for TRC (MW-129)
emailed to SEW 6/15/20

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+EB-RO-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#18A
Event: iH20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCU (122)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	925	NP	16.94	0.00	17.78	16.7	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	930	16.96	0.5	7.15	22.4	3570	3.2	107.0	15.9	colorless; clear	*Low-flow groundwater sample:*
↓	932	16.96	1.0	7.03	22.4	3600	2.4	105.8	15.5	↓	(A) peristaltic pump w/ ded tubing
↓	935	16.96	1.5	7.01	22.3	3610	2.4	105.7	12.1	↓	B) ded bladder pump
↓	937	16.96	2.0	7.00	22.3	3610	2.3	105.9	10.7	↓	C) non-ded bladder pump; or
↓	940	16.96	2.5	6.98	22.3	3620	2.3	106.3	10.4	↓	*Standard groundwater sample:*
↓	942	16.96	3.0	6.97	22.2	3620	2.1	106.9	10.1	↓	D) bailer due to limited column; or
↓	945	16.96	3.5	6.96	22.2	3630	2.1	108.0	9.8	↓	E) recovery well cycling sample
✓	947	16.96	4.0	6.95	22.1	3630	2.0	109.1	9.8	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	950	RW-#18A	16.96	6.95	22.1	3630	2.0	109.1	9.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓												
↓												
↓												
↓		RO Fields	Program	(2020)								
↓	950	RW-#18A	16.96	6.95	22.1	3630	2.0	109.1	9.8	Per COC	per COC	
↓	1005	EB-RO-01	NA							Per COC	per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-1A
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: LOS (123)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1541	NP	17.91	0.00	33.50	25.8	Yes	Yes	Yes	Yes		Weather: Sunny, 70's
6/17/20	935	NP	17.90	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	940	17.91	0.5	7.17	24.4	6790	5.4	108.8	17.5	clear/clear	*Low-flow groundwater sample:*
	943	17.91	1.0	6.99	23.0	6960	2.8	105.4	8.9		(A) peristaltic pump w/ ded tubing
	945	17.91	1.5	6.93	22.4	6880	2.6	108.6	5.2		B) ded bladder pump
	947	17.91	2.0	6.92	22.2	6780	2.3	109.1	4.1		C) non-ded bladder pump; or
	950	17.91	2.5	6.92	21.9	6750	2.2	110.2	3.7		*Standard groundwater sample:*
	953	17.91	3.0	6.91	22.0	6760	2.2	110.9	2.9		D) bailer due to limited column; or
	955	17.91	3.5	6.91	22.0	6760	2.1	111.6	3.2		E) recovery well cycling sample
	957	17.91	4.0	6.91	21.9	6760	2.1	112.2	2.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1000	KWB-1A	17.91	6.91	21.9	6760	2.1	112.2	2.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-1B
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GGS

124

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1543	NP	19.63	0.00	33.92	NS	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-1B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-1C
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GOS (125)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1545	NP	20.24	0.00	52.71	42.7	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Curr. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-1C										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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(Located ~25' N. of original KWB-10 pad) **Monitoring Well Purging and Sampling Record**

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-10R
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in	PVC ✓
Upright	4-in ✓	SS
Vault	Other	Other

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: COS (126)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1535	18.56	21.40	2.84	29.46	22.0	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT SAMPLED due to well						C) non-ded bladder pump; or
			2.5		having LNAPL thickness						*Standard groundwater sample:*
			3.0		≥ 0.03'						D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-10R										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-131
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GBS

127

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1255	NP	25.85	0.00	53.35	38.1	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1300	25.86	0.5	6.86	29.4	3020	2.7	-118.9	12.7	Colorless / clear	*Low-flow groundwater sample:*
	1303	25.87	1.0	6.84	28.2	3030	2.4	-123.5	15.6		(A) peristaltic pump w/ ded tubing
	1305	25.87	1.5	6.80	27.7	3030	2.3	-127.8	18.1	+ brown particles	B) ded bladder pump
	1307	25.87	2.0	6.77	26.8	3030	2.1	-131.9	15.6		C) non-ded bladder pump; or
	1310	25.87	2.5	6.75	26.4	2990	2.1	-135.8	16.2		*Standard groundwater sample:*
	1313	25.87	3.0	6.75	26.2	3010	2.0	-139.8	14.9		D) bailer due to limited column; or
	1315	25.87	3.5	6.74	26.3	2990	2.0	-142.5	13.9		E) recovery well cycling sample
	1317	25.87	4.0	6.74	26.2	2980	1.9	-144.4	14.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1320	MW-131	25.87	6.74	26.2	2980	1.9	-144.4	14.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-5
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade _	2-in ✓	PVC ✓
Upright ✓	4-in _	SS _
Vault _	Other _	Other _

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: DSD (128)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1655	25.72	27.11	1.39	37.68	30.7	Yes	Yes	Yes	Yes		Weather: Clear 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								(B) ded bladder pump
			2.0			No Sample ; LNAPL ≥ 0.03'					C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-5										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-111
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

* upon HMI arrival, tubing / bladder pump were removed. HMI "fished" bladder pump from base of well and installed new tubing.

Hydrologic Monitoring for TRC Houston, Texas

Initials: GDS

(129)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1725	NP	27.05	0.00	40.83	35.8	Yes	Yes	Yes	Yes		Weather: Sunny, 80's
6/17/20	1020	NP	26.99	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1025	27.08	0.5	6.70	27.8	4260	2.4	-62.8	100.1	Colorless / Sl. Cloudy	Low-flow groundwater sample:
	1027	27.08	1.0	6.68	26.7	4210	1.9	-74.6	111.2		A) peristaltic pump w/ ded tubing
	1030	27.08	1.5	6.65	26.0	4260	1.7	-83.9	128.6		(B) ded bladder pump
	1033	27.08	2.0	6.64	25.6	4280	1.7	-90.4	158		C) non-ded bladder pump; or
	1035	27.08	2.5	6.63	25.4	4260	1.6	-94.4	176	TAN / cloudy	Standard groundwater sample:
	1037	27.08	3.0	6.63	25.5	4310	1.6	-97.8	184		D) bailer due to limited column; or
	1040	27.08	3.5	6.62	25.5	4290	1.6	-100.1	192		E) recovery well cycling sample
	1043	27.08	4.0	6.62	25.5	4270	1.6	-103.0	7200		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1045	MW-111	27.08	6.62	25.5	4270	1.6	-103.0	7200	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

No Sock present

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-6
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GJS

(130)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1241	23.89	26.45	2.56	36.44	27.4	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT SAMPLED due to well						C) non-ded bladder pump; or
			2.5			having LNAPL thickness					*Standard groundwater sample:*
			3.0			≥ 0.03'					D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-6										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	* EDB in 1H20, per TRC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

* NO SOCK present

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-112
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GZS

(131)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1247	23.15	25.09	1.94	37.54	32.5	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT	SAMPLED	DUE to	WELL			C) non-ded bladder pump; or
			2.5		having	LNAPL	thickness				*Standard groundwater sample:*
			3.0			≥ 0.03'					D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-112								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

* No sock present

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-132
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GDS

(132)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1236	21.25	23.75	2.50	42.66	NA	Yes	Yes	Yes	Yes		Weather: Partly cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT SAMPLED		DUE	TO	WELL		C) non-ded bladder pump; or
			2.5			HAVING	LNAPL	THICKNESS			*Standard groundwater sample:*
			3.0			≥	0.03'				D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-132										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Located inside yellow vault; furthest South

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-57
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: DSD

133

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1500	NP	21.45	0.00	34.32	32.8	Yes	Yes	Yes	Yes		Weather: Clear 80's
			(21.45)									

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1505	21.57	0.5	6.98	24.5	3980	4.6	113.2	13.5	Colorless/Clear	*Low-flow groundwater sample:*
	1508	21.59	1.0	6.88	24.5	3990	4.2	112.6	11.6		A) peristaltic pump w/ ded tubing
	1510	21.64	1.5	6.81	24.4	4140	4.0	111.5	9.5		(B) ded bladder pump
	1513	21.68	2.0	6.78	24.4	4176	3.8	109.3	9.2		C) non-ded bladder pump; or
	1515	21.70	2.5	6.74	24.3	4190	3.7	107.4	8.4		*Standard groundwater sample:*
	1518	21.73	3.0	6.71	24.2	4220	3.5	105.2	8.1		D) bailer due to limited column; or
	1520	21.75	3.5	6.74	24.1	4250	3.4	103.1	7.8		E) recovery well cycling sample
	1522	21.77	4.0	6.73	24.1	4270	3.4	99.6	7.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1525	MW-57	21.77	6.73	24.1	4270	3.4	99.6	7.5	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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~32" corrugated stickup

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#11-0
Event: 1H20
Area of Concern: REST

Completion:	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC __
Upright ✓	4-in __	SS __
Vault __	Other 32-in	Other ✓ corrugated pipe

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GMS

(134)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1224	Dry	Dry	Dry	22.20	NA	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT	SAMPLED	Due	to	well		C) non-ded bladder pump; or
			2.5			being	dry				*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample
											(Historically not sampled)

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-#11-0										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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(until further notice, do not address in any way, per Navajo 4-26-16)

Monitoring Well Purging and Sampling Record (Farmer - Jack Joy, 575-365-6042)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-9
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

135

Well Inspection Information

(Historically - well casing obstructed @ 15.11')

Initials: LDS

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1227	NM	NM	NM	NM	NA	—	—	—	—		Weather: Partly Cloudy, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

DO NOT ADDRESS

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-9								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-12A
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: OSD (136)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1240	NP	23.88	0.00	25.03	24.9	Yes	Yes	Yes	Yes		Weather: Clear 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1245	24.02	0.5	6.90	26.6	2830	3.8	72.1	18.8	Colorless/Clear	Low-flow groundwater sample:
	1248	24.12	1.0	6.86	26.8	2840	3.4	70.9	12.5		(A) peristaltic pump w/ ded tubing
	1250	24.16	1.5	6.82	26.6	3050	3.3	69.3	11.6		B) ded bladder pump
	1253	24.18	2.0	6.79	26.2	3040	3.3	68.7	10.8		C) non-ded bladder pump; or
	1255	24.21	2.5	6.77	26.1	3040	3.2	68.2	9.6		Standard groundwater sample:
	1257	24.21	3.0	6.76	25.8	3030	3.2	67.8	9.2		D) bailer due to limited column; or
	1300	24.21	3.5	6.75	25.7	3040	3.2	67.2	6.5		E) recovery well cycling sample
	1302	24.23	4.0	6.73	25.5	3050	3.2	66.9	7.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1305	KWB-12A	24.23	6.73	25.5	3050	3.2	66.9	7.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ Dup-Rest-05 (same analysis)
+ EB-Rest-05 (same analysis)
+ Trip Blank-Rest-02

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-12B
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: OJD (137)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1330	NP	23.73	0.00	39.39	35.2	Yes	Yes	Yes	Yes		Weather: CLEAR 80'S

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1335	23.79	0.5	6.86	22.9	2760	5.2	59.4	9.8	Color/Less/Clear	Low-flow groundwater sample:
	1338	23.79	1.0	6.81	23.2	2760	5.0	61.2	9.2		A) peristaltic pump w/ ded tubing
	1340	23.79	1.5	6.80	23.4	2750	4.9	64.7	8.8		(B) ded bladder pump
	1343	23.79	2.0	6.79	23.5	2730	4.9	67.5	8.5		C) non-ded bladder pump; or
	1345	23.79	2.5	6.79	23.7	2720	4.9	69.8	8.1		Standard groundwater sample:
	1348	23.79	3.0	6.78	23.8	2720	4.8	71.4	7.6		D) bailer due to limited column; or
	1350	23.79	3.5	6.77	23.9	2700	4.8	73.3	7.2		E) recovery well cycling sample
	1353	23.79	4.0	6.75	23.9	2690	4.7	75.7	6.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1355	KWB-12B	23.79	6.75	23.9	2690	4.7	75.7	6.8	Per COC	Per COC	
	1200	Dup-Rest-05	23.79	6.75	23.9	2690	4.7	75.7	6.8	Same	Same	
	1415	EB-Rest-05	NA							Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-2R
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: [illegible]

(138)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1652	24.57	24.73	0.16	39.39	32.4	¥	¥	¥	¥	¥	Weather: Sunny, 90's

¥ At-grade prot. casing damaged and needs to be replaced. PVC well is functional and appears to not be damaged

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								Low-flow groundwater sample:
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		Not Sample	d due	to well				C) non-ded bladder pump; or
			2.5		having LNAPL thickness						Standard groundwater sample:
			3.0		≥ 0.03'						D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		KWB-2R										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-58
Event: iH20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: GAS

(139)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1703	23.43	24.05	0.62	33.06	25.6	Yes	Yes	Yes	Yes		Weather: Sunny, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT SAMPLED due to well						C) non-ded bladder pump; or
			2.5		having LNAPL thickness						*Standard groundwater sample:*
			3.0			≥ 0.03'					D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-58								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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HMI dedicated bladder pump (Pull pump; allow equilibration; then gauge)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: KWB-13
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: OJD (140)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1730	NP	28.42 (28.42)	0.00	33.10	30.1	Yes	Yes	Yes	Yes		Weather: Clear, 90s

Well Purging Record

* Top of pump @ 27.40'

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1735	>27.40	0.5	6.84	26.8	3010	6.4	-22.5	>200	Tan/Cloudy	Low-flow groundwater sample:
	1737	>27.40	1.0	6.81	26.4	3020	6.1	-17.5	>200		A) peristaltic pump w/ ded tubing
	1740	>27.40	1.5	6.78	26.3	3010	5.8	-15.8	>200		(B) ded bladder pump
	1742	>27.40	2.0	6.78	26.1	3020	5.7	-13.1	>200		C) non-ded bladder pump; or
	1745	>27.40	2.5	6.77	25.8	3030	5.5	-9.6	>200		Standard groundwater sample:
	1748	>27.40	3.0	6.76	25.5	3020	5.5	-7.6	>200		D) bailer due to limited column; or
	1750	>27.40	3.5	6.75	25.4	3020	5.4	-6.9	>200		E) recovery well cycling sample
	1752	>27.40	4.0	6.74	25.3	3020	5.4	-6.5	>200		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1755	KWB-13	>27.40	6.74	25.3	3020	5.4	-6.5	>200	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Sign-in & permit from South Crude Control Room prior to entry

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-103
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCY

(141)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1245	NP	17.69	0.00	25.22	22.2	Yes	Yes	Yes	Yes		Weather: clear, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1250	17.91	0.5	7.09	34.4	11,710	1.9	-305.1	5.6	colorless; clear	*Low-flow groundwater sample:*
	1252	17.97	1.0	7.06	33.9	11,800	1.8	-314.2	5.4		(A) peristaltic pump w/ ded tubing
	1255	18.03	1.5	7.05	34.0	11,840	1.7	-317.8	5.1		B) ded bladder pump
	1257	18.08	2.0	7.04	33.8	11,920	1.8	-321.3	5.0		C) non-ded bladder pump; or
	1300	18.11	2.5	7.04	33.7	11,980	1.7	-322.6	4.9		*Standard groundwater sample:*
	1302	18.14	3.0	7.04	33.7	12,010	1.7	-323.4	4.9		D) bailer due to limited column; or
	1305	18.17	3.5	7.04	33.6	12,030	1.7	-324.1	4.8		E) recovery well cycling sample
	1307	18.20	4.0	7.03	33.6	12,040	1.7	-324.7	4.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1310	MW-103	18.20	7.03	33.6	12,040	1.7	-324.7	4.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Sign-in & Permit from South Crude Control Room prior to entry

Monitoring Well Purging and Sampling Record

+ Dup-Rest-02 (Same analysis)
+ EB-Rest-02 (Same analysis)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-104
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCY

(142)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1350	NP	13.85	0.80	21.97	19.0	Yes	Yes	Yes	Yes		Weather: clear, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1355	13.98	0.5	6.81	28.3	2340	1.8	-318.9	4.0	colorless; clear	*Low-flow groundwater sample:*
	1357	14.04	1.0	6.88	27.9	2070	1.6	-323.6	3.8		(A) peristaltic pump w/ ded tubing
	1400	14.09	1.5	6.92	27.6	1950	1.5	-325.7	3.6		B) ded bladder pump
	1402	14.13	2.0	6.93	27.3	1854	1.5	-326.8	3.6		C) non-ded bladder pump; or
	1405	14.16	2.5	6.94	27.2	1838	1.5	-327.0	3.4		*Standard groundwater sample:*
	1407	14.19	3.0	6.95	27.2	1826	1.5	-327.3	3.4		D) bailer due to limited column; or
	1410	14.22	3.5	6.96	27.2	1807	1.4	-327.4	3.3		E) recovery well cycling sample
	1412	14.25	4.0	6.95	27.2	1804	1.4	-327.5	3.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1415	MW-104	14.25	6.95	27.2	1804	1.4	-327.5	3.3	Per COC	Per COC	
	1425	Dup-Rest-02	14.25	6.95	27.2	1804	1.4	-327.5	3.3	Same	Same	
	1435	EB-Rest-02	NA							Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Bagged tube; stretch to outside of berm

Monitoring Well Purging and Sampling Record

(Sock removed; replaced after sampling)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-64
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCH

(143)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1505	20.95	20.96	0.01*	34.08	26.6	Yes	Yes	Yes	Yes		Weather: Clear, 90s

*Removed w/ absorbant pad prior to sampling

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1510	21.16	0.5	6.91	36.5	2310	2.1	-310.6	26.1	colorless; clear	*Low-flow groundwater sample:*
	1512	21.25	1.0	6.91	36.3	2330	2.0	-315.5	24.4		(A) peristaltic pump w/ ded tubing
	1515	21.32	1.5	6.90	36.3	2340	2.1	-318.5	22.7		B) ded bladder pump
	1517	21.36	2.0	6.89	36.1	2340	2.2	-321.8	21.3		C) non-ded bladder pump; or
	1520	21.37	2.5	6.89	36.0	2350	2.3	-325.1	21.0		*Standard groundwater sample:*
	1522	21.38	3.0	6.88	35.9	2360	2.4	-327.1	20.4		D) bailer due to limited column; or
	1525	21.39	3.5	6.88	35.9	2360	2.4	-328.5	20.2		E) recovery well cycling sample
✓	1527	21.40	4.0	6.87	35.9	2360	2.4	-329.0	20.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1530	MW-64	21.40	6.87	35.9	2360	2.4	-329.0	20.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Bagged tube; Located in front of Navajo storage shed.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-65
Event: 1H20
Area of Concern: BEST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Saturated sock should be replaced w/ new sock w/ slightly shorter cord please - SCU 6/16/20

Initials: SCU

Hydrologic Monitoring for TRC Houston, Texas

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1550	17.84	18.99	1.15	28.78	23.8	Yes	Yes	Yes	Yes		Weather: Clear, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		Not	Sampled;	LNAPL	present	≥ 0.03'		C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20		MW-65								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge to top of guide-pipe

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-5R
Event: 11420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright __	4-in __	SS __
Above-grade Vault ✓	Other ✓	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCH (145)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1605	22.60	24.32	1.72	NM	24.0	Yes	Yes	Yes	Yes		Weather: clear, 90s
					(pump in well; reported total depth = 35.30 Ft-TOC)							

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0			Not sampled; LNAPL present ≥ 0.03					C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								(E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-5R								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Bagged tubes; do not dedicate, per historical observations.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-102
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCG

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1625	NP	16.65	0.00	26.45	21.3	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1630	16.68	0.5	6.98	30.0	2180	2.8	-274.5	20.5	colorless; clear	
	1632	16.68	1.0	6.94	29.5	2220	2.1	-286.8	17.4		
	1635	16.68	1.5	6.88	28.7	2240	1.9	-302.7	13.1		
	1637	16.68	2.0	6.86	28.3	2250	2.0	-307.0	10.4		
	1640	16.68	2.5	6.85	28.1	2250	2.1	-309.7	9.1		
	1642	16.68	3.0	6.85	28.0	2260	2.1	-310.4	9.0		
	1645	16.68	3.5	6.84	27.7	2260	2.2	-312.0	8.8		
↓	1647	16.68	4.0	6.84	27.6	2260	2.2	-312.4	8.5	↓	↓

Low-flow groundwater sample:
(A) peristaltic pump w/ ded tubing
B) ded bladder pump
C) non-ded bladder pump; or
Standard groundwater sample:
D) bailer due to limited column; or
E) recovery well cycling sample
F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1650	MW-102	16.68	6.84	27.6	2260	2.2	-312.4	8.5	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Bagged tube.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-4
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other ✓	Other __

(Recovery Well Doghouse)

Bracket to hold doghouse top open is damaged; prop open w/ pry bar

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SLG

(147)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1722	NP	15.05	0.00	36.62	31.6	yes	yes	yes	yes		Weather: pt cloudy, 90s
6/17/20	850	NP	15.08	0.00								

Well Purging Record

* Gauge/Sample through labeled guide-pipe.
* Drawdown not measured (narrow diam guide-pipe)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	855	NM *	0.5	6.69	27.3	2110	2.0	-296.9	18.8	colorless; clear	*Low-flow groundwater sample:*
	857		1.0	6.71	27.0	2110	1.8	-299.1	19.1		(A) peristaltic pump w/ ded tubing
	900		1.5	6.71	27.0	2110	2.0	-300.4	19.4		B) ded bladder pump
	902		2.0	6.72	26.9	2110	2.0	-301.1	19.7		C) non-ded bladder pump; or
	905		2.5	6.72	26.9	2110	2.1	-310.4	20.0		*Standard groundwater sample:*
	907		3.0	6.73	26.8	2110	2.2	-304.1	20.4		D) bailer due to limited column; or
	910		3.5	6.73	26.8	2100	2.2	-303.5	20.6		E) recovery well cycling sample
	912		4.0	6.73	26.7	2110	2.2	-303.8	20.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	915	RW-4	NM*	6.73	26.7	2110	2.2	-303.8	20.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Bagged tube.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-6
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other ✓	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCG (148)

Well Inspection Information

(Recovery well Doghouse)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	715	23.60	26.12	2.52	34.90	30.0	Yes	Yes	Yes	Yes		Weather: pt cloudy, 90s

Well Purging Record

* Gauge/Sample through labeled guide-pipe
* Drawdown not measured (narrow diam. guide-pipe)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity
		NM *	0.5							
			1.0							
			1.5							
			2.0				Not Sampled; LNAPL present ≥ 0.03			
			2.5							
			3.0							
			3.5							
			4.0							

Low-flow groundwater sample:
(A) peristaltic pump w/ ded tubing
B) ded bladder pump
C) non-ded bladder pump; or
Standard groundwater sample:
D) bailer due to limited column; or
E) recovery well cycling sample
F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		RW-6								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Position marked on adjacent fence; well is ~4' N. of chain-link fence; possibly covered by gravel/silt.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-99
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1731	NP	20.07	0.00	27.80	22.8	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s
6/17/20	1220	NP	20.10	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1230	20.18	0.5	6.55	29.6	1180	2.0	-265.0	35.0	lt. gray tint; clear	*Low-flow groundwater sample:*
↓	1232	20.21	1.0	6.53	28.9	1136	2.1	-272.5	31.9	↓	(A) peristaltic pump w/ ded tubing
	1235	20.22	1.5	6.51	28.7	1095	2.3	-275.5	32.1		B) ded bladder pump
	1237	20.23	2.0	6.50	28.5	1080	2.3	-278.4	33.9		C) non-ded bladder pump; or
	1240	20.23	2.5	6.50	28.4	1071	2.3	-279.5	34.3		*Standard groundwater sample:*
	1242	20.23	3.0	6.49	28.0	1052	2.4	-280.5	34.2		D) bailer due to limited column; or
	1245	20.23	3.5	6.49	28.0	1038	2.4	-281.7	34.1		E) recovery well cycling sample
↓	1247	20.23	4.0	6.49	28.0	1031	2.4	-282.2	34.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1250	MW-99	20.23	6.49	28.0	1031	2.4	-282.2	34.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Middle of gravel road; location marked on adjacent chain-link fence.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-66
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SLM (150)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1738	NP	19.34	0.00	29.80	24.6	yes	yes	yes	yes		Weather: pt. cloudy, 90s
6/17/20	1220	NP	19.36	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1225	19.51	0.5	6.97	29.8	2770	2.0	-156.2	54.5	colorless / sl. cloudy	*Low-flow groundwater sample:*
	1227	19.58	1.0	6.89	26.8	2740	1.7	-159.2	24.6	colorless / clear	(A) peristaltic pump w/ ded tubing
	1230	19.59	1.5	6.83	26.2	2720	1.6	-160.7	17.7		B) ded bladder pump
	1233	19.59	2.0	6.82	25.4	2730	1.7	-162.5	11.1		C) non-ded bladder pump; or
	1235	19.59	2.5	6.82	25.4	2730	1.7	-164.2	9.8		*Standard groundwater sample:*
	1237	19.59	3.0	6.83	25.2	2730	1.7	-166.2	8.2		D) bailer due to limited column; or
	1240	19.59	3.5	6.82	25.1	2730	1.6	-168.6	7.7		E) recovery well cycling sample
	1243	19.59	4.0	6.82	25.0	2730	1.6	-170.3	7.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1245	MW-99	19.59	6.82	25.0	2730	1.6	-170.3	7.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-28
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Formerly: Extended vertically through gravel berm
Converted to upright completion (in area of former berm, cut out to ground surface, pre 1Q20.

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCU

151

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1745	NP	20.18	0.00	27.82	23.8	yes	yes	yes	yes		Weather: pt cloudy, 90s
6/17/20	1315	NP	20.21	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1320	20.28	0.5	7.32	27.7	4110	1.4	-276.6	18.1	Colorless / clear	*Low-flow groundwater sample:*
	1323	20.33	1.0	7.31	25.4	4330	1.1	-308.9	10.6		(A) peristaltic pump w/ ded tubing
	1325	20.36	1.5	7.27	25.0	4390	1.1	-311.8	5.8		B) ded bladder pump
	1327	20.38	2.0	7.25	25.0	4420	1.2	-312.3	4.4		C) non-ded bladder pump; or
	1330	20.40	2.5	7.24	24.7	4440	1.2	-314.1	3.6		*Standard groundwater sample:*
	1333	20.41	3.0	7.23	24.4	4460	1.2	-315.6	2.9		D) bailer due to limited column; or
	1335	20.42	3.5	7.22	24.3	4470	1.2	-316.2	2.4		E) recovery well cycling sample
	1337	20.43	4.0	7.22	24.3	4480	1.2	-318.0	2.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1340	MW-28	20.43	7.22	24.3	4480	1.2	-318.0	2.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-59
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCA (152)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1750	NP	16.62	0.00	32.72	25.3	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s
6/17/20	950	NP	16.65	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	955	16.68	0.5	6.89	27.0	2870	2.3	-220.6	20.5	colorless; clear	*Low-flow groundwater sample:*
↓	957	16.68	1.0	6.86	26.8	2890	2.2	-225.8	15.4	↓	(A) peristaltic pump w/ ded tubing
↓	1000	16.68	1.5	6.84	26.6	2900	2.2	-232.3	13.5	↓	B) ded bladder pump
↓	1002	16.68	2.0	6.83	26.4	2900	2.3	-235.2	12.5	↓	C) non-ded bladder pump; or
↓	1005	16.68	2.5	6.82	26.3	2910	2.4	-239.5	11.9	↓	*Standard groundwater sample:*
↓	1007	16.68	3.0	6.81	26.3	2910	2.4	-241.9	11.2	↓	D) bailer due to limited column; or
↓	1010	16.68	3.5	6.80	26.3	2910	2.5	-243.9	11.0	↓	E) recovery well cycling sample
↓	1012	16.68	4.0	6.80	26.2	2910	2.5	-244.5	10.4	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1015	MW-59	16.68	6.80	26.2	2910	2.5	-244.5	10.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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(Support-trailer parking area)

Monitoring Well Purging and Sampling Record

+Dup-Rest-04 (same analysis)
+EB-Rest-04 (same analysis)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-60
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCG

(153)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1755	NP	17.95	0.00	37.78	26.7	yes	yes	yes	yes		Weather: pt. cloudy, 90s
6/17/20	1120	NP	17.98	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1125	18.12	0.5	6.59	29.3	3520	2.7	-275.9	7.5	colorless; clear	*Low-flow groundwater sample:*
	1127	18.18	1.0	6.58	28.7	3540	2.4	-284.1	7.0		(A) peristaltic pump w/ ded tubing
	1130	18.23	1.5	6.58	28.6	3550	2.5	-286.1	6.8		B) ded bladder pump
	1132	18.24	2.0	6.57	28.0	3560	2.9	-295.3	6.2		C) non-ded bladder pump; or
	1135	18.25	2.5	6.57	27.9	3560	2.9	-297.1	6.0		*Standard groundwater sample:*
	1137	18.25	3.0	6.57	27.9	3560	2.9	-298.7	5.9		D) bailer due to limited column; or
	1140	18.25	3.5	6.57	27.8	3560	2.9	-299.9	5.8		E) recovery well cycling sample
	1142	18.25	4.0	6.57	27.7	3560	2.9	-303.0	5.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1145	MW-60	18.25	6.57	27.7	3560	2.9	-303.0	5.6	Per COC	Per COC	
	1000	Dup-Rest-04	18.25	6.57	27.7	3560	2.9	-303.0	5.6	Same	Same	
	1205	EB-Rest-04	NA							Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-107
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCG (154)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1805	* 18.43	18.35	1.92	19.05	17.1	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

* DTP CONFIRMED

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0		NOT	SAMPLED	DUE	TO	LNAPL	> 0.03	C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-107								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Located 15' NW of NW corner of berm; Commonly buried by gravel / silt

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-128
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCU

155

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1812	18.35	20.26	1.91	35.35	25.4	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

* AT-grade; under dirt / gravel

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5		NOT SAMPLED due to LNAPL 20.03						*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-128								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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(Bagged extension, if flooded)

Monitoring Well Purging and Sampling Record

+ Trip Blank-03 (for TRC prgm) REST

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-116
Event: 1#20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCu (156)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1050	NP	16.18	0.00	27.63	20.0	Yes	Yes	Yes	Yes		Weather: Cloudy, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1055	16.23	0.5	6.98	21.2	3765	4.4	-21.8	8.2	colorless; clear	*Low-flow groundwater sample:*
↓	1058	16.24	1.0	6.94	19.8	3837	3.2	-24.8	6.0	↓	(A) peristaltic pump w/ ded tubing
	1100	16.24	1.5	6.91	-19.2	3889	3.1	-37.6	4.9		B) ded bladder pump
	1103	16.24	2.0	6.88	18.9	3921	3.0	-39.8	3.7		C) non-ded bladder pump; or
	1105	16.24	2.5	6.86	18.8	3947	2.8	-40.6	3.4		*Standard groundwater sample:*
	1108	16.24	3.0	6.85	18.8	3962	2.7	-41.2	3.2		D) bailer due to limited column; or
	1110	16.24	3.5	6.84	18.7	3971	2.6	-41.8	3.1		E) recovery well cycling sample
↓	1113	16.24	4.0	6.84	18.7	3976	2.6	-42.2	3.1	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6/16/20	1115	MW-116	16.24	6.84	18.7	3976	2.6	-42.2	3.1	Per COC	Per COC	
↓												
		RO Fields Program (2Q20)										
	1115	MW-116	16.24	6.84	18.7	3976	2.6	-42.2	3.1	per COC	per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-46R
Event: 1H20
Area of Concern: TMD

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in _	SS __
Vault __	Other __	Other __

N. side of dirt road; in-line with westernmost row of pecan trees; Position marked on adjacent chain-link fence (12' S. of fence)

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SG

157

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1820	NP	13.33	0.00	19.36	14.1	yes	yes	yes	yes		Weather: pt. cloudy, 90s
6/17/20	1320	NP	13.36	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1325	13.38	0.5	6.79	26.6	3370	2.7	17.2	24.2	colorless, clear	*Low-flow groundwater sample:*
	1327	13.38	1.0	6.75	26.1	3430	2.3	19.9	19.0		(A) peristaltic pump w/ ded tubing
	1330	13.38	1.5	6.72	25.9	3490	2.3	21.6	18.1		B) ded bladder pump
	1332	13.38	2.0	6.72	25.5	3500	2.4	22.1	17.4		C) non-ded bladder pump; or
	1335	13.38	2.5	6.71	25.4	3510	2.4	23.7	16.7		*Standard groundwater sample:*
	1337	13.38	3.0	6.71	25.3	3520	2.4	24.2	16.1		D) bailer due to limited column; or
	1340	13.38	3.5	6.71	25.3	3520	2.4	24.5	15.8		E) recovery well cycling sample
	1342	13.38	4.0	6.71	25.3	3520	2.4	24.7	15.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1345	MW-46R	13.38	6.71	25.3	3520	2.4	24.7	15.7	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Furthest west "city well"

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: UG-3R
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

158

Initials: SCU

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/15/20	1605	NP	22.37	0.00	38.58	35.6	Y/S	Y/S	Y/S	Y/S		Weather: clear, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/15/20	1610	22.37	0.5	6.42	24.8	2210	6.1	24.7	5.8	colorless ; clear	*Low-flow groundwater sample:*
↓	1612	22.38	1.0	6.56	24.9	2250	5.8	48.8	5.5	↓	A) peristaltic pump w/ ded tubing
↓	1615	22.38	1.5	6.62	24.6	2260	5.5	55.0	5.1	↓	(B) ded bladder pump
↓	1617	22.39	2.0	6.64	24.5	2250	5.7	61.1	4.6	↓	C) non-ded bladder pump; or
↓	1620	22.40	2.5	6.68	24.2	2260	5.6	70.1	4.3	↓	*Standard groundwater sample:*
↓	1622	22.40	3.0	6.70	24.4	2260	5.7	74.4	4.1	↓	D) bailer due to limited column; or
↓	1625	22.40	3.5	6.70	24.3	2260	5.7	76.4	4.0	↓	E) recovery well cycling sample
↓	1627	22.40	4.0	6.70	24.2	2260	5.6	77.0	3.8	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/15/20	1630	UG-3R	22.46	6.70	24.2	2260	5.6	77.0	3.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Location @ North-side park

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: UG-4
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(159)

Initials: SCU

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/15/20	1655	NP	19.58	0.00	39.24	34.5	yes	yes	yes	yes		Weather: clear, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/15/20	1700	19.75	0.5	6.96	26.3	3540	4.3	114.6	18.2	colorless; clear	*Low-flow groundwater sample:*
	1702	19.76	1.0	6.87	26.0	3600	3.4	116.5	15.4		(A) peristaltic pump w/ ded tubing
	1705	19.77	1.5	6.80	25.5	3640	2.9	119.1	12.7		B) ded bladder pump
	1707	19.78	2.0	6.77	25.3	3650	2.8	120.8	9.8		C) non-ded bladder pump; or
	1710	19.79	2.5	6.76	25.3	3660	2.8	121.8	9.6		*Standard groundwater sample:*
	1712	19.79	3.0	6.76	25.3	3660	2.7	121.9	9.6		D) bailer due to limited column; or
	1715	19.80	3.5	6.75	25.2	3660	2.7	122.1	9.2		E) recovery well cycling sample
	1717	19.80	4.0	6.75	25.0	3660	2.7	122.5	9.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/15/20	1720	UG-4	19.80	6.75	25.0	3670	2.7	122.5	9.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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North of elementary school

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: UG-1
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/15/20	1745	NP	13.02	0.00	24.08	19.1	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/15/20	1750	13.03	0.5	7.23	27.5	3190	5.5	126.4	8.1	colorless; clear	*Low-flow groundwater sample:*
	1752	13.03	1.0	7.12	27.2	3200	4.8	127.1	7.6		(A) peristaltic pump w/ ded tubing
	1755	13.03	1.5	7.06	27.1	3200	4.5	128.0	7.4		B) ded bladder pump
	1758	13.03	2.0	7.02	26.8	3200	4.4	128.6	5.8		C) non-ded bladder pump; or
	1800	13.03	2.5	7.00	26.8	3200	4.3	129.1	5.4		*Standard groundwater sample:*
	1802	13.03	3.0	6.98	26.6	3190	4.1	129.8	5.2		D) bailer due to limited column; or
	1805	13.03	3.5	6.97	26.6	3190	4.1	130.2	5.2		E) recovery well cycling sample
	1807	13.03	4.0	6.97	26.6	3190	4.1	130.3	5.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/15/20	1810	UG-1	13.03	6.97	26.6	3190	4.1	130.3	5.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Located near E-W alley, NW of Artesia Hotel

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: UG-2
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: SCU (161)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/15/20	1840	NP	16.81	0.00	29.28	24.3	Yes	Yes	Yes	Yes		Weather: pt. cloudy, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/15/20	1850	16.90	0.5	7.26	26.7	2250	3.9	121.2	5.4	colorless; clear	*Low-flow groundwater sample:*
↓	1852	16.90	1.0	7.23	26.5	2260	3.8	121.5	3.8	↓	(A) peristaltic pump w/ ded tubing
↓	1855	16.91	1.5	7.18	26.2	2250	3.5	122.4	3.6	↓	B) ded bladder pump
↓	1857	16.91	2.0	7.17	26.1	2250	3.4	122.7	3.4	↓	C) non-ded bladder pump; or
↓	1900	16.92	2.5	7.14	25.8	2240	3.4	123.1	3.1	↓	*Standard groundwater sample:*
↓	1902	16.92	3.0	7.12	25.6	2230	3.3	123.8	3.1	↓	D) bailer due to limited column; or
↓	1905	16.92	3.5	7.11	25.5	2230	3.2	124.4	3.0	↓	E) recovery well cycling sample
↓	1907	16.92	4.0	7.10	25.4	2230	3.2	124.6	3.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/15/20	1910	UG-2	16.92	7.10	25.4	2230	3.2	124.6	3.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+Trip Blank - Rest - 04

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-101
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade	2-in	PVC ✓
Upright ✓	4-in ✓	SS
Vault	Other	Other

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (162)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1440	NP	14.25	0.00	~~26.85~~	~~23.5~~	Yes	Yes	Yes	Yes		Weather: Sunny 90's
					24.10	20.75						

* Converted to at-grade completion prior to 1H20 event

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1445	14.27	0.5	6.97	26.9	1760	3.4	-198.4	12.7	Clear / Colorless	*Low-flow groundwater sample:*
	1447	14.27	1.0	6.95	26.9	1722	3.1	-201.5	10.2		(A) peristaltic pump w/ ded tubing
	1450	14.27	1.5	6.92	26.8	1682	2.9	-203.1	9.4		B) ded bladder pump
	1452	14.27	2.0	6.90	26.8	1674	2.8	-204.9	8.5		C) non-ded bladder pump; or
	1455	14.27	2.5	6.89	26.7	1652	2.6	-205.4	8.2		*Standard groundwater sample:*
	1457	14.27	3.0	6.88	26.6	1650	2.5	-207.6	7.9		D) bailer due to limited column; or
	1500	14.28	3.5	6.88	26.6	1647	2.4	-208.1	6.2		E) recovery well cycling sample
	1502	14.28	4.0	6.87	26.5	1641	2.4	-209.9	5.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1505	MW-101	14.28	6.87	26.5	1641	2.4	-209.9	5.4	Per COC	Per COC	

Take photo for TRC (MW-101)

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-105
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1650	ND	9.69	0.00	17.20	14.2	yes	yes	yes	yes		Weather: Clear 90°
6/17/20	900	ND	9.74	0.00								Clear 80°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	905	9.79	0.5	7.39	24.8	1712	1.8	-352.9	20.3	Clear colorless	*Low-flow groundwater sample:*
	907	9.79	1.0	7.37	24.6	1703	1.6	-354.3	16.0	odor	(A) peristaltic pump w/ ded tubing
	910	9.79	1.5	7.33	24.5	1726	1.4	-354.5	15.4		B) ded bladder pump
	913	9.79	2.0	7.23	24.3	1728	1.3	-355.7	13.7		C) non-ded bladder pump; or
	915	9.79	2.5	7.19	24.2	1730	1.2	-356.1	11.4		*Standard groundwater sample:*
	917	9.79	3.0	7.17	24.2	1733	1.2	-356.3	10.6		D) bailer due to limited column; or
	920	9.79	3.5	7.15	24.1	1735	1.1	-355.0	10.0		E) recovery well cycling sample
	923	9.79	4.0	7.15	24.1	1736	1.1	-354.7	9.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	925	mw-105	9.79	7.15	24.1	1736	1.1	-354.7	9.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Located in "Doghouse"; Bagged tube

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-2
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1530	15.02	15.53	0.51	36.13	31.1	yes	yes	yes	yes		Weather: clear 90s

Well Purging Record

* Gauge/Sample through labeled 1-in guide-pipe

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5	Not sampled due to LNAPL ≥ 0.03'							*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20		RW-2								Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-61
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: AB (165)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1526	ND	12.90	0.00	29.30	24.3	yes	yes	yes	yes		Weather: Clear 90°
6/17/20	950	ND	12.92	0.00								Clear 80°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Curr. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	955	13.10	0.5	6.72	27.1	2980	1.4	-348.9	9.1	Clear/Colorless	*Low-flow groundwater sample:*
	957	13.22	1.0	6.69	26.9	2970	1.2	-353.0	8.2		(A) peristaltic pump w/ ded tubing
	1000	13.33	1.5	6.68	26.8	2970	1.2	-355.2	6.0		B) ded bladder pump
	1003	13.41	2.0	6.66	26.7	2960	1.1	-360.2	4.0		C) non-ded bladder pump; or
	1005	13.51	2.5	6.65	26.6	2950	1.1	-362.3	3.8	Reduced Purge Rate	*Standard groundwater sample:*
	1010	13.61	3.0	6.65	26.4	2960	1.1	-366.2	2.9	100 mL/min	D) bailer due to limited column; or
	1015	13.71	3.5	6.65	26.4	2970	1.1	-366.5	2.7		E) recovery well cycling sample
	1020	13.74	4.0	6.64	26.4	2980	1.1	-367.1	2.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1025	MW-61	13.74	6.64	26.4	2980	1.1	-367.1	2.7	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-62
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

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Initials: TA B

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1500	NP	15.50	0.00	29.50	21.3	yes	yes	yes	yes		Weather: Clear 90s
6/17/20	1155	NP	15.51	0.00								Clear 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1200	15.67	0.5	6.44	27.2	2830	1.5	-341.2	12.1	Clear/Colorless	*Low-flow groundwater sample:*
	1203	15.77	1.0	6.44	27.0	2820	1.5	-346.3	9.7	odor	(A) peristaltic pump w/ ded tubing
	1205	15.84	1.5	6.46	26.9	2810	1.5	-350.8	7.8		B) ded bladder pump
	1207	15.89	2.0	6.47	26.8	2810	1.4	-351.2	7.5		C) non-ded bladder pump; or
	1210	15.93	2.5	6.48	26.6	2810	1.4	-351.0	7.5		*Standard groundwater sample:*
	1213	15.96	3.0	6.48	26.5	2800	1.4	-350.2	7.3		D) bailer due to limited column; or
	1215	15.99	3.5	6.49	26.5	2800	1.4	-350.9	5.8		E) recovery well cycling sample
	1217	16.01	4.0	6.49	26.5	2800	1.4	-351.3	4.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1220	MW-62	16.01	6.49	26.5	2800	1.4	-351.3	4.9	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-93
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other ___

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1550	ND	9.90	0.00	20.23	15.9	yes	yes	yes	yes		Weather: Clear 90s
6/17/20	1100	ND	9.92	0.00			↓	↓	↓	↓		Clear 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1105	10.02	0.5	6.47	25.2	3010	1.5	-342.8	8.1	Clear/Odorless	*Low-flow groundwater sample:*
↓	1107	10.08	1.0	6.47	24.5	3060	1.3	-346.9	7.8	↓ Odor	(A) peristaltic pump w/ ded tubing
	1110	10.13	1.5	6.46	24.1	2980	1.2	-341.7	7.0		B) ded bladder pump
	1113	10.16	2.0	6.45	24.1	2970	1.1	-348.8	6.8		C) non-ded bladder pump; or
	1115	10.18	2.5	6.45	24.0	2980	1.1	-350.5	6.3		*Standard groundwater sample:*
	1117	10.21	3.0	6.44	23.9	2970	1.0	-354.7	6.1		D) bailer due to limited column; or
	1120	10.23	3.5	6.45	23.9	2970	1.0	-351.6	6.0		E) recovery well cycling sample
↓	1123	10.25	4.0	6.47	23.9	2970	1.0	-353.0	3.7	↓ ↓ ↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1125	MW-93	10.25	6.47	23.9	2970	1.0	-353.0	3.7	Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-43
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in.	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: JA B

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1400	ND	13.99	0.60	19.67	16.5	yes	yes	yes	yes		Weather: Clear 90°
6/17/20	1400	ND	14.00	0.00			↑	↑	↑	↑		Clear 100°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1405	14.05	0.5	6.72	28.9	3240	1.5	-338.7	10.1	Clear/Colorless	*Low-flow groundwater sample:*
↑	1407	14.09	1.0	6.68	28.8	3205	1.3	-338.9	9.7	↓	(A) peristaltic pump w/ ded tubing
↓	1410	14.11	1.5	6.67	29.7	3220	1.2	-341.9	7.7	↓	B) ded bladder pump
↓	1413	14.13	2.0	6.69	29.7	3220	1.1	-343.5	7.5	↓	C) non-ded bladder pump; or
↓	1415	14.14	2.5	6.71	29.4	3210	1.1	-343.8	6.6	↓	*Standard groundwater sample:*
↓	1417	14.15	3.0	6.71	29.2	3200	1.1	-345.7	6.5	↓	D) bailer due to limited column; or
↓	1420	14.16	3.5	6.72	29.1	3190	1.1	-346.6	6.2	↓	E) recovery well cycling sample
↓	1423	14.16	4.0	6.72	29.1	3190	1.1	-346.3	6.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1425	MW-43	14.16	6.72	29.1	3190	1.1	-346.3	6.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-137
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB (169)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1430	11.38	12.47	1.09	29.60	24.6	yes	yes	yes	yes		Weather: Clear 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0	Not sampled due to LNAPL 20.03'							C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20		MW-137								Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-138
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: AB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1420	12.89	15.49	2.60	24.81	19.8	yes	yes	yes	yes		Weather: clear 90°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5	Not Sampled Due To LNAPL ≥ 0.03'							*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20		mw-138								Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-23
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1450	ND	16.94	0.00	23.10	17.9	yes	yes	yes	yes		Weather: clear 90°
6/17/20	1300	ND	16.28	0.00								clear 90°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1305	16.38	0.5	6.96	28.6	2820	1.6	-308.5	6.0	clear/yellow tint	Low-flow groundwater sample:
	1307	16.43	1.0	6.95	28.4	2800	1.3	-311.9	5.8	odor	(A) peristaltic pump w/ ded tubing
	1310	16.51	1.5	6.95	28.2	2790	1.2	-313.7	5.2		B) ded bladder pump
	1313	16.56	2.0	6.94	28.2	2770	1.1	-311.9	4.5		C) non-ded bladder pump; or
	1315	16.58	2.5	6.96	28.0	2770	1.2	-311.1	4.3		Standard groundwater sample:
	1317	16.60	3.0	6.95	28.0	2760	1.2	-309.7	3.4		D) bailer due to limited column; or
	1320	16.62	3.5	6.94	28.0	2760	1.1	-309.4	3.3		E) recovery well cycling sample
	1323	16.63	4.0	6.94	28.1	2760	1.1	-310.6	3.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1325	MW-23	16.63	6.94	28.1	2760	1.1	-310.6	3.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+Dup-TEL-01 (Same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-4
Event: 1H20
Area of Concern: TEL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: AB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1230	NP	12.67	0.00	27.27	22.2	yes	yes	yes	yes		Weather: Clear 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1235	12.91	0.5	6.88	27.1	3860	1.5	-234.7	8.0	Clear / colorless	Low-flow groundwater sample:
	1237	12.91	1.0	6.86	26.6	3850	1.3	-236.8	7.6		(A) peristaltic pump w/ ded tubing
	1240	12.91	1.5	6.84	25.9	3840	1.1	-236.7	6.9		B) ded bladder pump
	1243	12.91	2.0	6.83	25.2	3840	1.0	-306.9	6.6		C) non-ded bladder pump; or
	1245	12.91	2.5	6.82	25.1	3840	0.9	-307.7	6.2		Standard groundwater sample:
	1247	12.91	3.0	6.80	24.8	3840	0.8	-307.8	6.1		D) bailer due to limited column; or
	1250	12.91	3.5	6.78	24.7	3830	0.7	-308.1	5.8		E) recovery well cycling sample
	1253	12.91	4.0	6.77	24.5	3830	0.7	-308.9	5.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1255	TEL-4	12.91	6.77	24.5	3830	0.7	-308.9	5.6	Per COC	Per COC	
	1200	Dup-TEL-01	12.91	6.77	24.5	3830	0.7	-308.9	5.6	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-3
Event: 1H20
Area of Concern: TEL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	11:00	14.10	14.16	0.06	27.19	22.2	yes	yes	yes	yes		Weather: Clear 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1155		0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5	Not	Sampled	Due	To	LNAPL	2 0.03		B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0		(Needs	Sock	in	well)			D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20		TEL-3								Per COC	Per COC	
				Not	Sampled							

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+EB-TEL-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-2
Event: 1H20
Area of Concern: TEL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1160	ND	15.20	0.00	27.20	22.1	yes	yes	yes	yes		Weather: pt/cloudy 80°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1105	15.27	0.5	7.02	26.4	3280	1.2	-340.2	5.0	Clear colorless	Low-flow groundwater sample:
	1107	15.27	1.0	7.01	26.5	3270	0.9	-341.7	4.8	light sheen	(A) peristaltic pump w/ ded tubing
	1110	15.27	1.5	6.98	26.1	3280	0.8	-345.5	4.5		B) ded bladder pump
	1113	15.27	2.0	6.96	25.9	3290	0.8	-348.4	4.3		C) non-ded bladder pump; or
	1115	15.27	2.5	6.95	25.9	3280	0.7	-350.7	4.1		Standard groundwater sample:
	1117	15.27	3.0	6.94	25.9	3280	0.7	-352.2	3.7		D) bailer due to limited column; or
	1120	15.27	3.5	6.92	25.8	3290	0.7	-353.8	3.6		E) recovery well cycling sample
	1123	15.27	4.0	6.92	25.8	3290	0.7	-354.1	3.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1125	TEL-2	15.27	6.92	25.8	3290	0.7	-354.1	3.4	Per COC	Per COC	
	1140	EB-TEL-01	NA	→	→	→	→	→	→	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ Trip Blank - TEL-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: TEL-1
Event: 1H20
Area of Concern: TEL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB (175)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1000	ND	14.52	0.00	27.00	22.9	yes	yes	yes	yes		Weather: P/Cloudy 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1005	14.76	0.5	7.32	25.1	2580	1.4	-261.0	6.8	Clear colorless	Low-flow groundwater sample:
	1007	14.76	1.0	7.28	24.7	2570	1.2	-265.8	4.6		(A) peristaltic pump w/ ded tubing
	1010	14.76	1.5	7.25	24.5	2570	1.1	-270.2	4.3		B) ded bladder pump
	1013	14.76	2.0	7.22	24.3	2550	0.9	-273.7	4.4		C) non-ded bladder pump; or
	1015	14.76	2.5	7.21	24.2	2550	0.9	-275.2	4.0		Standard groundwater sample:
	1017	14.76	3.0	7.20	24.0	2550	0.8	-276.9	4.0		D) bailer due to limited column; or
	1020	14.76	3.5	7.20	24.0	2550	0.8	-278.8	4.2		E) recovery well cycling sample
	1023	14.76	4.0	7.19	24.0	2550	0.8	-279.1	4.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1025	TEL-1	14.76	7.19	24.0	2550	0.8	-279.1	4.4	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-39
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (176)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1110	NP	15.22	0.00	25.44	20.4	Yes	Yes	Yes	Yes		Weather: Sunny 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1115	15.33	0.5	7.29	27.7	3050	2.4	-284.1	6.1	clear / colorless	*Low-flow groundwater sample:*
	1117	15.33	1.0	7.28	27.7	3010	2.2	-287.4	5.3		(A) peristaltic pump w/ ded tubing
	1120	15.33	1.5	7.28	27.6	2970	1.9	-289.8	5.0		B) ded bladder pump
	1122	15.33	2.0	7.29	27.5	2940	1.7	-291.6	4.7		C) non-ded bladder pump; or
	1125	15.33	2.5	7.28	27.4	2900	1.6	-294.4	4.3		*Standard groundwater sample:*
	1127	15.33	3.0	7.27	27.4	2860	1.6	-295.8	4.4		D) bailer due to limited column; or
	1130	15.33	3.5	7.27	27.3	2840	1.5	-296.2	3.8		E) recovery well cycling sample
	1132	15.33	4.0	7.26	27.3	2830	1.5	-297.3	3.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.16.20	1135	mw-39	15.33	7.26	27.3	2830	1.5	-297.3	3.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-98
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB (177)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1330	NP	12.88	0.80	25.60	21.5	yes	yes	yes	yes		Weather: Clear 90s
			(12.88)									

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1335	12.93	0.5	6.77	26.1	3260	1.6	-371.2	16.2	Clear / colorless	*Low-flow groundwater sample:*
	1337	12.93	1.0	6.74	26.0	3260	1.4	-372.5	8.7		(A) peristaltic pump w/ ded tubing
	1340	12.93	1.5	6.70	25.9	3230	1.2	-372.9	7.5		B) ded bladder pump
	1343	12.94	2.0	6.69	25.9	3230	1.1	-376.7	6.6		C) non-ded bladder pump; or
	1345	12.94	2.5	6.68	25.7	3220	0.9	-377.0	6.5		*Standard groundwater sample:*
	1347	12.95	3.0	6.68	25.6	3210	0.8	-377.1	6.4		D) bailer due to limited column; or
	1350	12.95	3.5	6.67	25.5	3210	0.8	-377.0	6.5		E) recovery well cycling sample
	1353	12.95	4.0	6.67	25.5	3210	0.8	-376.6	6.3		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	1355	mw-98	12.95	6.67	25.5	3210	0.8	-376.6	6.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-10
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 8-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(178)

Well Inspection Information The former RW-10 is permanently covered by heavy steel box. Current RW-10 is the stand-pipe ~50' South of former RW-10 per Navajo. Initials: TAB

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	900	NP	15.18	0.00	22.49	17.5	yes	yes	yes	yes		Weather: partly cloudy 70°
					(22.49)							

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	905	15.19	0.5	7.08	23.2	2560	1.4	-301.8	2.8	Clear colorless	*Low-flow groundwater sample:*
	907	15.19	1.0	7.07	22.8	2520	1.1	-307.4	2.7	odor	(A) peristaltic pump w/ ded tubing
	910	15.19	1.5	7.06	22.8	2520	1.1	-308.7	2.6		B) ded bladder pump
	913	15.19	2.0	7.07	21.9	2530	1.0	-316.2	2.4		C) non-ded bladder pump; or
	915	15.19	2.5	7.08	20.6	2530	1.0	-319.7	2.2		*Standard groundwater sample:*
	917	15.19	3.0	7.09	22.1	2520	0.9	-322.6	2.3		D) bailer due to limited column; or
	920	15.19	3.5	7.09	22.2	2520	0.9	-324.7	2.5		E) recovery well cycling sample
	923	15.19	4.0	7.10	22.3	2520	0.9	-326.5	2.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/16/20	925	RW-10	15.19	7.10	22.3	2520	0.9	-326.5	2.7	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-40
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB to SCD

(179)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	900	NP	13.86	0.00	24.75	21.8	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	905	13.95	0.5	6.79	22.2	2810	2.5	-296.2	67.5	sl. Cloudy / w/ black particles	Low-flow groundwater sample:
	907	13.95	1.0	6.76	22.0	2750	1.9	-334.1	42.6	↓	(A) peristaltic pump w/ ded tubing
	910	13.95	1.5	6.74	21.9	2720	1.7	-351.9	21.9	Clear/colorless w/	B) ded bladder pump
	912	13.95	2.0	6.72	21.8	2700	1.6	-359.2	14.5	black particles	C) non-ded bladder pump; or
	915	13.95	2.5	6.71	21.8	2690	1.6	-361.5	12.3		Standard groundwater sample:
	917	13.95	3.0	6.71	21.7	2680	1.5	-363.4	10.2		D) bailer due to limited column; or
	920	13.95	3.5	6.70	21.7	2680	1.5	-364.9	9.8		E) recovery well cycling sample
	922	13.95	4.0	6.70	21.7	2670	1.5	-365.9	9.1		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	925	mw-40	13.95	6.70	21.7	2670	1.5	-365.9	9.1	Per COC	Per COC	(TRC)
		RO Field Program (2Q20)										
	925	mw-40	13.95	6.70	21.7	2670	1.5	-365.9	9.1			
										per COC	per COC	(wood)

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample.

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-41
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (180)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1015	NP	14.02	0.00	21.56	18.6	Yes	Yes	Yes	Yes		Weather: Sunny, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1020	14.06	0.5	6.64	25.4	5070	2.9	-206.1	9.5	Clear / colorless	*Low-flow groundwater sample:*
	1022	14.06	1.0	6.62	25.3	5170	2.7	-208.3	9.1		(A) peristaltic pump w/ ded tubing
	1025	14.06	1.5	6.60	25.3	5210	2.5	-211.4	8.8		B) ded bladder pump
	1027	14.06	2.0	6.59	25.3	5240	2.4	-213.7	8.7		C) non-ded bladder pump; or
	1030	14.06	2.5	6.58	25.2	5280	2.4	-215.5	8.0		*Standard groundwater sample:*
	1032	14.06	3.0	6.57	25.1	5290	2.3	-216.1	7.4		D) bailer due to limited column; or
	1035	14.06	3.5	6.57	25.1	5300	2.3	-216.9	7.2		E) recovery well cycling sample
	1037	14.06	4.0	6.56	25.1	5300	2.2	-217.4	6.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1040	MW-41	14.06	6.56	25.1	5300	2.2	-217.4	6.7	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-9
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 8-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(181)

Well Inspection Information The former RW-9 is permanently covered by heavy steel box. Current RW-9 is the stand-pipe ~50' East of former RW-9, per Navajo. Initials: RJM

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1210	NP	15.19	0.00	21.83	16.8	Yes	yes	yes	yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1215	15.20	0.5	6.99	26.3	3630	1.9	-335.1	3.8	Clear / Colorless	*Low-flow groundwater sample:*
	1217	15.20	1.0	6.92	26.1	3620	1.8	-339.4	3.6		(A) peristaltic pump w/ ded tubing
	1220	15.20	1.5	6.88	26.1	3620	1.6	-341.5	3.3		B) ded bladder pump
	1222	15.20	2.0	6.85	26.1	3610	1.5	-342.7	3.0		C) non-ded bladder pump; or
	1225	15.20	2.5	6.84	26.0	3610	1.5	-344.1	2.9		*Standard groundwater sample:*
	1227	15.20	3.0	6.84	26.0	3610	1.4	-345.6	2.4		D) bailer due to limited column; or
	1230	15.20	3.5	6.83	26.0	3620	1.4	-346.0	1.7		E) recovery well cycling sample
	1232	15.20	4.0	6.83	26.0	3610	1.3	-346.8	1.5		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mc Juliet, TN
6.16.20	1235	RW-9	15.20	6.83	26.0	3610	1.3	-346.8	1.5	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-42
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB

(182)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
8/16/20	1610	ND	15.48	0.00	24.32	21.3	yes	yes	yes	yes		Weather: Clear 90°
6/17/20	1355	ND	15.40	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1400	15.51	0.5	7.25	28.1	5790	2.2	-316.8	7.3	Colorless / clear	Low-flow groundwater sample:
	1403	15.53	1.0	7.03	26.7	5920	2.4	-324.9	8.6		(A) peristaltic pump w/ ded tubing
	1405	15.53	1.5	6.90	26.3	5960	2.4	-325.7	6.8		B) ded bladder pump
	1407	15.53	2.0	6.89	25.9	6010	2.5	-329.6	6.2		C) non-ded bladder pump; or
	1410	15.53	2.5	6.84	25.4	6020	2.5	-333.7	5.7		Standard groundwater sample:
	1413	15.53	3.0	6.80	25.3	6040	2.4	-336.0	5.4		D) bailer due to limited column; or
	1415	15.53	3.5	6.78	25.2	6090	2.4	-339.1	5.9		E) recovery well cycling sample
✓	1417	15.53	4.0	6.76	25.2	6110	2.4	-341.8	5.2	✓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1420	MW-42	15.53	6.76	25.2	6110	2.4	-341.8	5.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ DUP-RO-01

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-29
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB to SCD

(183)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	955	NP	20.76	0.00	24.22	19.2	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 70's

↳ lowered tubing intake as needed

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1000	20.78	0.5	6.97	23.5	4110	3.1	-282.6	15.5	clear/colorless	Low-flow groundwater sample:
↓	1002	20.78	1.0	6.93	23.2	4220	2.4	-292.5	13.1	↓	(A) peristaltic pump w/ ded tubing
	1005	20.78	1.5	6.91	23.1	4240	2.0	-305.9	11.5		B) ded bladder pump
	1007	20.78	2.0	6.90	23.1	4250	1.9	-314.5	10.2		C) non-ded bladder pump; or
	1010	20.78	2.5	6.89	23.0	4260	1.8	-320.5	9.8		Standard groundwater sample:
	1012	20.78	3.0	6.89	23.0	4260	1.8	-322.9	9.5		D) bailer due to limited column; or
	1015	20.78	3.5	6.88	23.0	4270	1.7	-324.1	9.1		E) recovery well cycling sample
↓	1017	20.78	4.0	6.88	23.1	4270	1.7	-325.8	8.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1020	MW-29	20.78	6.88	23.1	4270	1.7	-325.8	8.9	Per COC	Per COC	(TRC)
		RO Field Program (2Q20)										
	1020	MW-29	20.78	6.88	23.1	4270	1.7	-325.8	8.9	Per COC	Per COC	(Wood)
↓	1000	DUP-RO-01	20.78	6.88	23.1	4270	1.7	-325.8	8.9	Same	Same	Same

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#16B
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 8-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (184)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	930	NP	17.10	0.00	17.70	14.7	yes	yes	yes	yes	* cracked pad	Weather: Sunny 80's

* lowered sample intake to base

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20			0.5								*Low-flow groundwater sample:*
			1.0	No Purge	Due to	limited	water	column			(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.16.20	940	RW-#16B	17.49	6.79	25.5	4080	2.0	29.2	8.5	Per COC	Per COC	(Hole to fill all bottles)

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-30
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: JA KB

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1600	ND	15.90	0.60	23.50	NS	yes	yes	yes	yes		Weather: clear 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-30								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-56
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB to SCD

186

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1100	NP	16.67	0.00	26.50	21.4	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/16/20	1105	16.71	0.5	6.81	23.3	3690	2.3	-172.5	4.2	Clear / colorless	*Low-flow groundwater sample:*
	1107	16.71	1.0	6.77	22.9	3720	1.7	-169.9	3.5		(A) peristaltic pump w/ ded tubing
	1110	16.71	1.5	6.74	22.7	3750	1.5	-164.7	3.1		B) ded bladder pump
	1112	16.71	2.0	6.72	22.5	3790	1.4	-161.2	2.9		C) non-ded bladder pump; or
	1115	16.71	2.5	6.71	22.4	3820	1.4	-159.5	2.5		*Standard groundwater sample:*
	1117	16.71	3.0	6.71	22.4	3840	1.3	-157.2	2.2		D) bailer due to limited column; or
	1120	16.71	3.5	6.70	22.3	3850	1.3	-156.1	2.0		E) recovery well cycling sample
	1122	16.71	4.0	6.70	22.3	3850	1.3	-156.0	1.9		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/16/20	1125	MW-56	16.71	6.70	22.3	3850	1.3	-156.0	1.9	Per COC	Per COC	(TRC)
		RO Field Program (2020)										
	1125	MW-56	16.71	6.70	22.3	3850	1.3	-156.0	1.9	Per COC	Per COC	(wood)

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Located under yellow barricade

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-49
Event: 1H20
Area of Concern: TEL

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: RJM (187)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1315	NP	12.95	0.00	33.07	27.8	Yes	yes	yes	yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1320	13.16	0.5	6.70	27.4	2830	2.5	-363.2	24.3	clear / colorless	*Low-flow groundwater sample:*
	1322	13.17	1.0	6.65	27.3	2800	2.2	-366.4	14.2		(A) peristaltic pump w/ ded tubing
	1325	13.17	1.5	6.63	27.3	2780	2.0	-368.5	10.4		B) ded bladder pump
	1327	13.17	2.0	6.61	27.3	2760	1.9	-369.8	9.7		C) non-ded bladder pump; or
	1330	13.17	2.5	6.60	27.2	2750	1.7	-370.4	8.5		*Standard groundwater sample:*
	1332	13.17	3.0	6.60	27.2	2750	1.6	-372.1	8.2		D) bailer due to limited column; or
	1335	13.17	3.5	6.59	27.2	2740	1.5	-372.9	7.7		E) recovery well cycling sample
	1337	13.17	4.0	6.59	27.2	2740	1.5	-373.4	6.2		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6-16-20	1340	mw-49	13.17	6.59	27.2	2740	1.5	-373.4	6.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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May get covered with gravel

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-106
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

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Well Inspection Information *Located in-line with the final letter "A" from "Ammonia" sign on gray tank with yellow ladder. Initials: RJM

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1600	NP	10.32	0.00	22.80	17.5	Yes	Yes	Yes	Yes		Weather: Sunny 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1605	10.44	0.5	6.72	26.8	2730	2.7	-362.4	14.1	Clear / colorless	*Low-flow groundwater sample:*
	1607	10.47	1.0	6.70	26.8	2770	2.4	-367.1	12.3		(A) peristaltic pump w/ ded tubing
	1610	10.50	1.5	6.68	26.7	2800	2.1	-370.5	10.5		B) ded bladder pump
	1612	10.52	2.0	6.67	26.7	2810	1.9	-372.4	9.0		C) non-ded bladder pump; or
	1615	10.55	2.5	6.65	26.7	2810	1.8	-374.5	8.3		*Standard groundwater sample:*
	1617	10.57	3.0	6.64	26.6	2820	1.7	-375.1	7.6		D) bailer due to limited column; or
	1620	10.58	3.5	6.64	26.6	2830	1.6	-375.9	7.4		E) recovery well cycling sample
	1622	10.58	4.0	6.63	26.6	2830	1.6	-377.1	6.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6-16-20	1625	MW-106	10.58	6.63	26.6	2830	1.6	-377.1	6.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-45
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: TAB (189)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6/16/20	1630	NP	11.27	0.00	15.05	12.3	yes	yes	yes	yes		Weather: clear 90s
6/17/20	1455	NP	11.42	0.00			/	/	/	/		clear 100s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1500	11.46	0.5	7.02	23.3	4550	1.6	-229.9	10.3	clear/colorless	Low-flow groundwater sample:
↓	1503	11.46	1.0	7.00	23.0	4560	1.4	-228.8	7.0	↓	(A) peristaltic pump w/ ded tubing
↓	1505	11.46	1.5	6.98	22.9	4540	1.3	-227.2	6.8	↓	B) ded bladder pump
↓	1507	11.46	2.0	6.95	22.9	4540	1.2	-226.4	4.4	↓	C) non-ded bladder pump; or
↓	1510	11.46	2.5	6.96	23.0	4540	1.2	-225.9	4.0	↓	Standard groundwater sample:
↓	1513	11.46	3.0	6.94	23.1	4530	1.3	-226.5	3.3	↓	D) bailer due to limited column; or
↓	1515	11.46	3.5	6.93	23.2	4530	1.4	-226.6	3.2	↓	E) recovery well cycling sample
↓	1517	11.46	4.0	6.93	23.2	4530	1.4	-227.8	3.0	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6/17/20	1520	MW-45	11.46	6.93	23.2	4530	1.4	-227.8	3.0	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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SW corner of Louden Bldg.
Installed 2/19.

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-139
Event: 1420
Area of Concern: RESJ

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: LJH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1120	NP	13.86	0.00	29.60	24.6	Yes	Yes	Yes	Yes		Weather: Clear, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1125	13.91	0.5	6.68	24.9	4160	1.4	-253.1	20.8	Colorless, clear,	*Low-flow groundwater sample:*
↓	1127	13.91	1.0	6.67	24.2	4160	1.2	-272.1	18.2	sl. odor	(A) peristaltic pump w/ ded tubing
↓	1130	13.91	1.5	6.67	23.8	4160	1.3	-284.7	12.6	↓	B) ded bladder pump
↓	1132	13.91	2.0	6.67	23.6	4160	1.3	-287.4	10.1	↓	C) non-ded bladder pump; or
↓	1135	13.91	2.5	6.67	23.5	4170	1.4	-286.2	9.5	↓	*Standard groundwater sample:*
↓	1137	13.91	3.0	6.66	23.4	4180	1.4	-285.2	9.0	↓	D) bailer due to limited column; or
↓	1140	13.91	3.5	6.66	23.4	4180	1.5	-284.1	8.6	↓	E) recovery well cycling sample
↓	1142	13.91	4.0	6.66	23.4	4190	1.5	-282.9	8.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.16.20	1145	mw-139	13.91	6.66	23.4	4190	1.5	-282.9	8.2	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-50
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

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Well Inspection Information *Located in Artesia Wool laydown yard, N. of main warehouse.

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1205	NP	14.85	0.00	28.22	24.1	Yes	Yes	Yes	Yes		Weather: Clear, 80's

Well Purging Record *SC confirmed

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1210	14.86	0.5	6.83	26.5	8810	1.7	-70.4	10.7	Colorless; Clear	*Low-flow groundwater sample:*
	1212	14.86	1.0	6.82	25.5	9210	1.3	-61.3	9.6		(A) peristaltic pump w/ ded tubing
	1215	14.86	1.5	6.81	25.2	9220	1.1	-63.1	9.0		B) ded bladder pump
	1217	14.86	2.0	6.82	25.1	9230	1.1	-135.1	8.6		C) non-ded bladder pump; or
	1220	14.86	2.5	6.82	25.1	9150	1.1	-224.6	8.0		*Standard groundwater sample:*
	1222	14.86	3.0	6.83	25.0	8780	1.0	-241.2	7.5		D) bailer due to limited column; or
	1225	14.86	3.5	6.83	25.0	8320	1.0	-246.7	7.2		E) recovery well cycling sample
	1227	14.86	4.0	6.84	25.1	8110	1.1	-250.1	6.9		F) irrigation well grab sample
	1230	14.86	4.5	6.84	25.1	8010	1.1	-254.2	7.1		
	1232	14.86	5.0	6.84	25.1	7960	1.1	-257.1	6.8		

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.16.20	1235	MW-50	14.86	6.84	25.1	7960	1.1	-257.1	6.8	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-97
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

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Initials: CJH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1250	10.81	14.06	3.25	21.20	5' off	Yes	Yes	Yes	Yes		Weather: Clear, 80's
				*		base						

Well Purging Record

* Thickness confirmed, sorbent sock in well

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		Not	Sampled	due to	presence			(A) peristaltic pump w/ ded tubing
			1.5		of	LNAPL	≥ 0.03'				B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-97								Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-92
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

(193)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1305	13.11	13.67	0.56	22.60	17.6	Yes	Yes	Yes	Yes		Weather: Clear, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		Not	Sampled	due	to	presence of		(A) peristaltic pump w/ ded tubing
			1.5		LNAPL	≥ 0.03'.					B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-92								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Bagged tube

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-1
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Well Inspection Information In "doghouse"; gauge/sample through 1-in guide-pipe

Initials: CJH (194)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1320	14.37	15.08	0.71	35.39	30.4	Yes	Yes	Yes	Yes		Weather: Clear, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		Not	sampled	due	to	presence		(A) peristaltic pump w/ ded tubing
			1.5		of	LNAPL	≥ 0.03'.				B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		RW-1								Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-91
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

195

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1335	NP	12.78	0.00	25.35	17.9	Yes	Yes	Yes	Yes		Weather: Clear, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1340	12.93	0.5	6.43	26.2	4260	2.1	-368.5	21.0	Yellow color;	*Low-flow groundwater sample:*
	1342	12.98	1.0	6.45	25.9	4110	1.3	-374.1	17.9	clear; strong odor	(A) peristaltic pump w/ ded tubing
	1345	13.02	1.5	6.46	25.1	4010	1.0	-352.6	15.1		B) ded bladder pump
	1347	13.06	2.0	6.46	24.9	3970	1.1	-354.0	12.6		C) non-ded bladder pump; or
	1350	13.09	2.5	6.47	24.7	3930	1.2	-354.6	11.0		*Standard groundwater sample:*
	1352	13.12	3.0	6.47	24.6	3910	1.3	-355.4	10.1		D) bailer due to limited column; or
	1355	13.14	3.5	6.48	24.6	3890	1.4	-356.7	9.6		E) recovery well cycling sample
	1357	13.16	4.0	6.48	24.7	3870	1.4	-357.9	8.8		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.16.20	1400	mw-91	13.16	6.48	24.7	3870	1.4	-357.9	8.8	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-90
Event: iH20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (196)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1420	NP	12.66	0.00	22.80	21.5	Yes	Yes	Yes	Yes		Weather: Clear, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1425	12.76	0.5	6.69	24.6	3790	1.4	-352.4	10.8	Colorless; clear; odor	*Low-flow groundwater sample:*
	1427	12.81	1.0	6.72	23.6	3790	1.1	-363.1	10.1		(A) peristaltic pump w/ ded tubing
	1430	12.84	1.5	6.72	23.4	3780	1.0	-366.1	9.6		B) ded bladder pump
	1432	12.87	2.0	6.72	23.2	3770	0.9	-368.7	9.2		C) non-ded bladder pump; or
	1435	12.90	2.5	6.71	23.2	3750	0.9	-370.4	8.5		*Standard groundwater sample:*
	1437	12.92	3.0	6.71	23.1	3740	0.9	-372.6	8.0		D) bailer due to limited column; or
	1440	12.94	3.5	6.71	23.1	3730	1.0	-374.1	7.8		E) recovery well cycling sample
	1442	12.95	4.0	6.71	23.1	3730	1.0	-376.3	7.4		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.16.20	1445	MW-90	12.95	6.71	23.1	3730	1.0	-376.3	7.4	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-96
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (197)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1505	NP	12.85	0.00	25.57	21.2	Yes	Issue	NO	Yes		Weather: Clear, 90's
								*	Lock			

* Well was struck prior to 2H17 event. Hinge is broken and well not secure.

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1510	12.86	0.5	6.73	26.5	2430	1.4	-345.3	11.6	Colorless; Clear	*Low-flow groundwater sample:*
↓	1512	12.87	1.0	6.72	25.3	2340	1.1	-361.0	10.1	↓	(A) peristaltic pump w/ ded tubing
	1515	12.87	1.5	6.72	25.1	2300	0.9	-370.2	9.1		B) ded bladder pump
	1517	12.87	2.0	6.72	24.9	2270	0.9	-374.1	7.6		C) non-ded bladder pump; or
	1520	12.87	2.5	6.71	24.8	2240	1.0	-375.6	6.8		*Standard groundwater sample:*
	1522	12.87	3.0	6.71	24.7	2220	1.0	-372.2	6.4		D) bailer due to limited column; or
	1525	12.87	3.5	6.70	24.7	2210	1.1	-370.3	5.9		E) recovery well cycling sample
↓	1527	12.87	4.0	6.70	24.7	2210	1.1	-369.0	5.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.16.20	1530	MW-96	12.87	6.70	24.7	2210	1.1	-369.0	5.6	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL and collect groundwater sample

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Bagged tube

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-94
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (198)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1550	14.63	18.50	3.87 *	23.45	16.0	Yes	Yes	Yes	Yes		Weather: Clear, 90's

* Thickness Confirmed

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Curr. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5		Not	Sampled	due	to	Presence		B) ded bladder pump
			2.0		of	LNAPL	≥	0.03'			C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-94								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Bagged tube

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-8
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(199)

Well Inspection Information In "doghouse"; gauge/sample through 1-in. guide-pipe.

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1600	13.62	15.72	2.10	37.22	35.2	Yes	Yes	Yes	Yes		Weather: Clear, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		Not sampled due to presence						(A) peristaltic pump w/ ded tubing
			1.5		of LNAPL ≥ 0.03'.						B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
												Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-67
Event: iH20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in __	PVC ✓
Upright __	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (200)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1610	12.18	12.23	0.05	27.30	19.9	Yes	Yes	Yes	Yes		Weather: Clear, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		Not sampled due to presence						(A) peristaltic pump w/ ded tubing
			1.5		of LNAPL ≥ 0.03'.						B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
		MW-67								Per COC	Per COC	+ SVOC

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-95
Event: 1H20
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

(201)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1620	NP	14.86	0.00	25.37	20.4	Yes	Yes	Yes	Yes		Weather: Clear, 90's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1625	14.89	0.5	6.78	26.7	2900	1.2	-289.5	6.1	Colorless, clear;	*Low-flow groundwater sample:*
↓	1627	14.89	1.0	6.77	25.7	2900	1.0	-299.1	5.6	sl. odor	(A) peristaltic pump w/ ded tubing
	1630	14.89	1.5	6.76	25.0	2890	0.9	-306.1	5.0	↓	B) ded bladder pump
	1632	14.89	2.0	6.75	24.9	2890	0.8	-309.6	4.5		C) non-ded bladder pump; or
	1635	14.89	2.5	6.74	24.8	2880	0.7	-311.9	4.7		*Standard groundwater sample:*
	1637	14.89	3.0	6.74	24.7	2870	0.7	-313.7	4.2		D) bailer due to limited column; or
	1640	14.89	3.5	6.73	24.7	2870	0.6	-315.6	3.6		E) recovery well cycling sample
↓	1642	14.89	4.0	6.73	24.6	2860	0.6	-317.1	3.1	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6.16.20	1645	MW-95	14.89	6.73	24.6	2860	0.6	-317.1	3.1	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-7
Event: 1420
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

(202)

Well Inspection Information In "doghouse"; gauge / sample through 1-in guide-pipe.

Initials: CJH

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1700	NP	13.84	0.00	37.00	32.0	Yes	Yes	Yes	Yes		Weather: Clear, 90's
6.17.20	1155	NP	13.86	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1200	NM	0.5	6.66	26.2	2550	1.9	-356.1	15.1	Black Color; Clear;	*Low-flow groundwater sample:*
↓	1202	↓	1.0	6.65	25.9	2520	1.7	-355.0	13.0	black particles; odor	(A) peristaltic pump w/ ded tubing
↓	1205	↓	1.5	6.65	25.7	2490	1.5	-356.8	11.9	Sheen	B) ded bladder pump
↓	1207	↓	2.0	6.65	25.6	2460	1.4	-359.2	10.3	↓	C) non-ded bladder pump; or
↓	1210	↓	2.5	6.64	25.5	2440	1.3	-362.9	9.7	↓	*Standard groundwater sample:*
↓	1212	↓	3.0	6.64	25.5	2420	1.2	-364.6	9.4	↓	D) bailer due to limited column; or
↓	1215	↓	3.5	6.64	25.4	2410	1.2	-366.8	9.0	↓	E) recovery well cycling sample
↓	1217	↓	4.0	6.64	25.4	2410	1.2	-368.5	8.3	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1220	RW-7	NM	6.64	25.4	2410	1.2	-368.5	8.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-34A
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (203)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1706	NP	13.40	0.00	19.26	16.8	Yes	Yes	No	Yes		Weather: Clear, 90's
6.17.20	1245	NP	13.44	0.00					Lock			

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1250	13.56	0.5	6.52	26.6	2470	2.6	-353.6	7.9	Colorless; clear; odor	*Low-flow groundwater sample:*
	1252	13.56	1.0	6.52	25.9	2470	2.1	-360.1	7.4		(A) peristaltic pump w/ ded tubing
	1255	13.57	1.5	6.53	25.1	2450	1.9	-364.2	6.8		B) ded bladder pump
	1257	13.57	2.0	6.53	24.8	2440	1.7	-363.7	6.5		C) non-ded bladder pump; or
	1300	13.57	2.5	6.53	24.7	2420	1.5	-364.2	6.1		*Standard groundwater sample:*
	1302	13.57	3.0	6.54	24.7	2410	1.4	-366.1	5.6		D) bailer due to limited column; or
	1305	13.57	3.5	6.54	24.6	2400	1.4	-368.9	5.4		E) recovery well cycling sample
	1307	13.57	4.0	6.54	24.6	2400	1.4	-370.1	5.0		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1310	NCL-34A	13.57	6.54	24.6	2400	1.4	-370.1	5.0	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-33
Event: 1420
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (204)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1713	NP	12.10	0.00	19.60	17.7	Yes	Yes	Yes	Yes		Weather: Clear, 90's
6.17.20	1330	NP	12.12	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1335	12.21	0.5	6.42	26.2	4900	1.9	-223.7	159.0	Orange tint;	*Low-flow groundwater sample:*
↓	1337	12.27	1.0	6.43	25.1	4940	1.6	-230.1	65.0	Sl. Cloudy; orange	(A) peristaltic pump w/ ded tubing
↓	1340	12.32	1.5	6.44	24.6	4910	1.4	-233.4	53.0	Particles	B) ded bladder pump
↓	1342	12.36	2.0	6.44	24.4	4850	1.3	-237.5	39.4	↓	C) non-ded bladder pump; or
↓	1345	12.40	2.5	6.45	24.5	4830	1.2	-238.4	27.4	Colorless; Clear;	*Standard groundwater sample:*
↓	1347	12.43	3.0	6.44	24.6	4810	1.2	-239.1	20.1	orange Particles	D) bailer due to limited column; or
↓	1350	12.46	3.5	6.44	24.6	4790	1.1	-240.6	14.1	↓	E) recovery well cycling sample
↓	1352	12.48	4.0	6.45	24.7	4780	1.1	-241.7	9.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1355	NCL-33	12.48	6.45	24.7	4780	1.1	-241.7	9.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-44
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

(205)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1718	NP	11.85	0.00	21.34	16.3	Yes	Yes	Yes	Yes		Weather: Clear, 80's
6.17.20	1110	NP	11.86	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1115	11.89	0.5	6.59	25.5	3230	3.4	-240.1	10.6	Colorless; Clear	*Low-flow groundwater sample:*
	1117	11.89	1.0	6.58	24.9	3230	2.3	-250.8	9.4		(A) peristaltic pump w/ ded tubing
	1120	11.89	1.5	6.58	24.5	3210	2.0	-262.4	9.0		B) ded bladder pump
	1122	11.89	2.0	6.58	24.3	3190	1.9	-268.6	8.7		C) non-ded bladder pump; or
	1125	11.89	2.5	6.57	24.2	3180	1.8	-271.7	8.2		*Standard groundwater sample:*
	1127	11.89	3.0	6.57	24.2	3180	1.8	-274.7	7.7		D) bailer due to limited column; or
	1130	11.89	3.5	6.56	24.3	3170	1.9	-277.2	7.4		E) recovery well cycling sample
	1132	11.89	4.0	6.56	24.3	3170	1.9	-280.4	6.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1135	NCL-44	11.89	6.56	24.3	3170	1.9	-280.4	6.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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+EB-NCL-01 (same analysis)

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-32
Event: 1H20
Area of Concern: NCL

Completion:	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

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Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1725	NP	12.26	0.00	20.04	18.1	Yes	Yes	Yes	Yes		Weather: Clear, 80's
6.17.20	1025	NP	12.30	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1030	12.41	0.5	6.95	24.8	3200	1.6	-146.9	21.9	Colorless; Clear	*Low-flow groundwater sample:*
↓	1032	12.42	1.0	6.94	23.8	3180	1.4	-148.0	18.6	↓	(A) peristaltic pump w/ ded tubing
↓	1035	12.43	1.5	6.89	23.4	3170	1.3	-145.0	16.1	↓	B) ded bladder pump
↓	1037	12.43	2.0	6.86	23.2	3180	1.2	-141.2	14.9	↓	C) non-ded bladder pump: or
↓	1040	12.43	2.5	6.83	23.1	3190	1.2	-137.1	12.2	↓	*Standard groundwater sample:*
↓	1042	12.44	3.0	6.81	23.1	3190	1.1	-134.0	10.3	↓	D) bailer due to limited column; or
↓	1045	12.44	3.5	6.80	23.0	3200	1.1	-130.6	9.2	↓	E) recovery well cycling sample
↓	1047	12.44	4.0	6.79	23.0	3200	1.1	-127.7	8.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umhos/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.17.20	1050	NCL-32	12.44	6.79	23.0	3200	1.1	-127.7	8.6	Per COC	Per COC	
↓	1100	EB-NCL-01	NA	—	—	—	—	—	→	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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*Access on foot

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-108
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (207)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1730	NP	15.30	0.00	27.74	22.5	Yes	Yes	Yes	Yes		Weather: Clear, 80's
6.17.20	900	NP	15.40	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	905	15.51	0.5	6.68	26.1	1846	1.4	-358.1	19.8	Yellow Color;	*Low-flow groundwater sample:*
↓	907	15.60	1.0	6.73	25.5	1811	1.3	-366.2	17.0	Clear; odor	(A) peristaltic pump w/ ded tubing
	910	15.66	1.5	6.75	25.3	1796	1.2	-368.7	15.1	↓	B) ded bladder pump
	912	15.71	2.0	6.76	25.1	1784	1.2	-370.2	14.2		C) non-ded bladder pump; or
	915	15.75	2.5	6.76	25.0	1775	1.2	-372.6	13.6		*Standard groundwater sample:*
	917	15.79	3.0	6.77	24.9	1770	1.3	-374.5	10.4		D) bailer due to limited column; or
	920	15.82	3.5	6.77	24.9	1765	1.3	-376.1	9.6		E) recovery well cycling sample
↓	922	15.85	4.0	6.78	24.8	1761	1.3	-378.9	9.1	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments Lab: Pace National, Mt. Juliet, TN
6.17.20	925	MW-108	15.85	6.78	24.8	1761	1.3	-378.9	9.1	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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SW of NCL field

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-31
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

(208)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1735	NP	12.17	0.00	20.16	17.4	Issue	Yes	Yes	Yes		Weather: Clear, 80's
6.17.20	940	NP	12.23				*					

*Cannot fit Cap and close lid

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	945	12.39	0.5	6.87	27.1	3100	1.9	-294.6	9.0	Colorless; Clear	
↓	947	12.41	1.0	6.86	26.9	3030	1.7	-294.2	8.6	↓	
↓	950	12.41	1.5	6.85	26.5	2950	1.6	-290.4	8.2	↓	
↓	952	12.41	2.0	6.84	26.4	2940	1.5	-286.2	7.9	↓	
↓	955	12.41	2.5	6.84	26.3	2920	1.4	-285.1	7.4	↓	
↓	957	12.41	3.0	6.83	26.2	2910	1.4	-282.0	6.9	↓	
↓	1000	12.41	3.5	6.83	26.2	2900	1.3	-280.3	6.6	↓	
↓	1002	12.41	4.0	6.82	26.1	2890	1.3	-278.6	6.3	↓	

Low-flow groundwater sample:
(A) peristaltic pump w/ ded tubing
B) ded bladder pump
C) non-ded bladder pump; or
Standard groundwater sample:
D) bailer due to limited column; or
E) recovery well cycling sample
F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1005	NCL-31	12.41	6.82	26.1	2890	1.3	-278.6	6.3	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Gauge Only

Monitoring Well Purging and Sampling Record (Not in "Sampling" Program)

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-19
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (209)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1740	NP	12.45	0.00	22.08	NS	Yes	Yes	Issue *	Yes		Weather: Clear, 90's

*Not Secure; needs protective casing

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-19								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-55
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH to BPH (210)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6-16-20	1015	NP	15.02	0.00	26.85	21.7	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy, 90s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6-16-20	1020	15.06	0.5	6.71	20.4	3340	3.0	67.5	9.8	Colorless, clear	*Low-flow groundwater sample:*
	1023	15.06	1.0	6.64	19.6	3360	2.9	69.7	9.2		(A) peristaltic pump w/ ded tubing
	1025	15.06	1.5	6.61	19.3	3340	2.7	70.3	8.8		B) ded bladder pump
	1028	15.06	2.0	6.59	19.2	3320	2.4	71.0	8.5		C) non-ded bladder pump; or
	1030	15.06	2.5	6.59	19.0	3310	2.2	71.4	8.3		*Standard groundwater sample:*
	1033	15.06	3.0	6.59	18.9	3300	2.0	71.8	8.0		D) bailer due to limited column; or
	1035	15.06	3.5	6.58	18.9	3290	1.9	72.1	7.9		E) recovery well cycling sample
	1038	15.06	4.0	6.58	18.8	3280	1.9	72.3	7.7		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments (Lab: Pace National, Mt. Juliet, TN)
6-16-20	1040	MW-55	15.06	6.58	18.8	3280	1.9	72.3	7.7	Per COC	Per COC	(TRC)
		RO Fields Program (2Q 20)										
	1040	MW-55	15.06	6.58	18.8	3280	1.9	72.3	7.7	Per COC	Per COC	(Wood)

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: RW-#17A
Event: iH2O
Area of Concern: REST

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

[Bell-shaped PVC stickup w/ PVC slip cap]

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: AJS (211)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1755	NP	14.54	0.00	16.01	*14.0	Yes	Yes	Yes	Yes		Weather: Partly Cloudy, 100's
6/17/20	1445	NP	14.56	0.00		(* lowered intake to base of well)						

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6/17/20	1450	14.61	0.5	8.03	26.5	7990	3.1	-112.4	19.4	colorless / clear	*Low-flow groundwater sample:*
	1453	14.68	1.0	8.02	23.6	8490	2.9	-102.4	11.0		(A) peristaltic pump w/ ded tubing
	1455	14.70	1.5	8.01	22.6	8370	3.0	-95.2	7.6		B) ded bladder pump
	1457	14.71	2.0	8.02	22.3	8300	3.0	-89.4	5.8		C) non-ded bladder pump; or
	1500	14.71	2.5	8.01	22.3	8260	3.0	-86.3	5.0		*Standard groundwater sample:*
	1503	14.71	3.0	8.01	22.3	8270	2.9	-83.9	3.9		D) bailer due to limited column; or
	1505	14.71	3.5	8.02	22.3	8270	2.9	-80.6	4.1		E) recovery well cycling sample
	1507	14.71	4.0	8.02	22.3	8270	2.9	-77.5	3.6		F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6/17/20	1510	RW-#17A	14.71	8.02	22.3	8270	2.9	-77.5	3.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

Received by OCD: 11/22/2022 9:24:38 AM

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-18
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other 6-in	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (212)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1749	NP	14.14	0.00	22.20	20.2	Yes	Yes	Yes	Yes		Weather: Clear, 100's
6.17.20	1415	NP	14.17	0.00								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.17.20	1420	14.24	0.5	6.81	24.9	3390	1.8	-221.6	6.7	Colorless; clear	*Low-flow groundwater sample:*
↓	1422	14.24	1.0	6.80	24.6	3350	1.6	-227.6	6.2	↓	(A) peristaltic pump w/ ded tubing
↓	1425	14.24	1.5	6.79	24.5	3330	1.5	-233.4	5.8	↓	B) ded bladder pump
↓	1427	14.24	2.0	6.76	24.4	3310	1.4	-236.4	5.4	↓	C) non-ded bladder pump; or
↓	1430	14.24	2.5	6.75	24.3	3300	1.4	-237.5	4.9	↓	*Standard groundwater sample:*
↓	1432	14.24	3.0	6.75	24.3	3290	1.3	-239.1	4.5	↓	D) bailer due to limited column; or
↓	1435	14.24	3.5	6.74	24.2	3290	1.3	-240.6	4.4	↓	E) recovery well cycling sample
↓	1437	14.24	4.0	6.74	24.3	3280	1.3	-242.5	3.6	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.17.20	1440	mw-18	14.24	6.74	24.3	3280	1.3	-242.5	3.6	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-54A
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

213

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	930	NP	14.77	0.00	31.30	23.6	Yes	Yes	Yes	Yes		Weather: clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	935	14.78	0.5	6.46	24.4	2590	2.7	65.8	9.8	Colorless; clear	*Low-flow groundwater sample:*
|	937	14.79	1.0	6.48	23.6	2610	2.2	73.7	9.2	|	(A) peristaltic pump w/ ded tubing
|	940	14.79	1.5	6.50	23.1	2600	2.0	73.6	8.5	|	B) ded bladder pump
|	942	14.79	2.0	6.51	22.9	2590	1.9	70.7	8.1	|	C) non-ded bladder pump; or
|	945	14.79	2.5	6.51	22.8	2590	1.8	68.8	7.8	|	*Standard groundwater sample:*
|	947	14.79	3.0	6.52	22.8	2580	1.8	67.1	7.5	|	D) bailer due to limited column; or
|	950	14.79	3.5	6.52	22.7	2580	1.7	66.2	6.2	|	E) recovery well cycling sample
↓	952	14.79	4.0	6.53	22.7	2580	1.7	65.0	5.9	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments: Lab: Pace National, Mt. Juliet, TN
6.16.20	955	MW-54A	14.79	6.53	22.7	2580	1.7	65.0	5.9	Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Gauge Only

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-54B
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

214

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1010	NP	14.83	0.00	46.80	41.8	Yes	Yes	Yes			Weather: Pt. cloudy, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0								(A) peristaltic pump w/ ded tubing
			1.5								B) ded bladder pump
			2.0								C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		MW-54B								Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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+ Dup- NCL-01 (Same analysis)
+ Trip Blank - NCL-01 ✓

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: NCL-49
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade __	2-in ✓	PVC __
Upright ✓	4-in __	SS ✓
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH (215)

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1020	NP	18.18	0.00	32.18	27.2	Yes	Yes	Yes	Yes		Weather: Pt. Cloudy, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
6.16.20	1025	18.20	0.5	6.92	24.4	3640	2.5	107.5	7.2	Colorless; Clear	*Low-flow groundwater sample:*
↓	1027	18.20	1.0	6.90	23.7	3670	2.1	119.9	6.5	↓	(A) peristaltic pump w/ ded tubing
↓	1030	18.20	1.5	6.89	23.4	3670	2.0	124.0	6.1	↓	B) ded bladder pump
↓	1032	18.20	2.0	6.89	23.3	3660	2.0	126.7	5.7	↓	C) non-ded bladder pump; or
↓	1035	18.20	2.5	6.88	23.3	3650	2.0	128.4	5.0	↓	*Standard groundwater sample:*
↓	1037	18.20	3.0	6.88	23.2	3640	1.9	130.1	4.8	↓	D) bailer due to limited column; or
↓	1040	18.20	3.5	6.87	23.2	3640	1.9	132.6	4.5	↓	E) recovery well cycling sample
↓	1042	18.20	4.0	6.87	23.3	3630	1.9	133.7	4.2	↓	F) irrigation well grab sample

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
6.16.20	1045	NCL-49	18.20	6.87	23.3	3630	1.9	133.7	4.2	Per COC	Per COC	Lab: Pace National, Mt. Juliet, TN
↓												
↓												
↓												
↓	1000	Dup-NCL-01	18.20	6.87	23.3	3630	1.9	133.7	4.2	Same	Same	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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mw-53R reinstalled - March 2020, per TRC

Not reinstalled yet, 1H20

Monitoring Well Purging and Sampling Record

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Well: MW-53R
Event: 1H20
Area of Concern: NCL

Completion	Casing Diam.	Casing Material
At-Grade ✓	2-in ✓	PVC ✓
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring
for TRC
Houston, Texas

Initials: CJH

(216)

Well Inspection Information ~15' S. of 70 mile marker (285 north-bound)

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Well Inspection: Cap	Casing	Well Secured	Label	Other	Comments
6.16.20	1110	NM	NM	NM	~~23.60~~	~~19.6~~	NA	NA	NA	NA		Weather: Clear, 80's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Water Color / Clarity	
			0.5								*Low-flow groundwater sample:*
			1.0		well	still	unable	to be	located	due	(A) peristaltic pump w/ ded tubing
			1.5		to	construction	activity	"MW-53R"	has		B) ded bladder pump
			2.0		not	been	drilled	per	Navajo's	Demingo	C) non-ded bladder pump; or
			2.5								*Standard groundwater sample:*
			3.0								D) bailer due to limited column; or
			3.5								E) recovery well cycling sample
			4.0								F) irrigation well grab sample

mw-53 scheduled for replacement "MW-53R"

[mw-53 was lost due to construction

when installed, mw-53 to mw-53R (planned for re-install) will have new TD & Intake !!!

SLu 3-12-20

Well Sampling Record

Date	Time	Sample I.D.	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv	Comments
		mw-53R										Lab: Pace National, Mt. Juliet, TN
										Per COC	Per COC	

No groundwater sample collected if LNAPL thickness is greater than, or equal to 0.03'; if LNAPL thickness is measured at 0.01' or 0.02', remove LNAPL, and collect groundwater sample

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Instrument Calibration Log

Navajo Refining Company
Artesia Refinery
Artesia, New Mexico

Hydrologic Monitoring
for TRC
Houston, Texas

Date	Time	pH Hanna (Std. units)	Specific Conductivity Hanna (umho/cm)	Dissolved Oxygen Hanna (Slope Cal. in saturated air)	Turbidity Lamotte (NTU)	ORP Hanna HI 7020 Soln (200-275 mV)	PID Thermo Environmental 100 ppm Isobutylene	Initials / Comments
6/15/20	1545	4.01/7.00	1,000	100 %	10.0	241.4	NA	SCU
6/16/20	640	4.01/7.00	1,000	100%	10.0	243.0	NA	SCU
6/16/20	645	4.01/7.00	1,000	100%	10.0	249.8	NA	BB
6/16/20	649	4.01/7.00	1,000	100%	10.0	237.1	NA	CDJ
6-16-20	652	4.01/7.00	1,000	100%	10.0	241.2	NA	MDB
6-16-20	655	4.01/7.00	1,000	100%	10.0	239.6	NA	SCD
6-16-20	659	4.01/7.00	1,000	100%	10.0	224.9	NA	BRH
6.16.20	701	4.01/7.00	1,000	100%	10.0	226.1	NA	CJH
6.16.20	705	4.01/7.00	1,000	100%	10.0	248.9	NA	TAB
6-16-20	708	4.01/7.00	1,000	100%	10.0	221.7	N/A	OJD
6.16.20	711	4.01/7.00	1,000	100%	10.0	212.9	NA	RJM
6/17/20	645	4.01/7.00	1,000	100%	10.0	241.7	NA	SCU
6/17/20	652	4.01/7.00	1,000	100%	10.0	231.9	NA	CDJ
6.17.20	655	4.01/7.00	1,000	100%	10.0	226.1	NA	CJH
6-17-20	658	4.01/7.00	1,000	100%	10.0	222.7	NA	BRH
6-17-20	700	4.01/7.00	1,000	100%	10.0	237.8	NA	MDB
6/17/20	706	4.01/7.00	1,000	100%	10.0	221.7	N/A	OJD
6/17/20	708	4.01/7.00	1,000	100%	10.0	229.8	NA	BB
6-17-20	711	4.01/7.00	1,000	100%	10.0	236.7	NA	SCD
6.17.20	714	4.01/7.00	1,000	100%	10.0	250.1	NA	TAB
6.17.20	717	4.01/7.00	1,000	100%	10.0	212.3	NA	RJM

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DAY 1

Chain of Custody Page 1 of 6

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

L #
Table #
Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-6A	Grab	GW		6/16/20	1055	10	X	X	X	X	X	X						
MW-85	Grab	GW				10	X	X	X	X	X	X						
MW-86	Grab	GW				11	X	X	X		X	X	X	X				
MW-120	Grab	GW		6/16/20	1145	10	X	X	X	X	X	X						
MW-121	Grab	GW		6/16/20	1230	10	X	X	X	X	X	X						
MW-84	Grab	GW				10	X	X	X	X	X	X						
MW-122	Grab	GW				10	X	X	X	X	X	X						
MW-81	Grab	GW				10	X	X	X	X	X	X						
MW-80	Grab	GW				10	X	X	X	X	X	X						
MW-79	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **EP (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude
Immediately
Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 2 of 6

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#

Table #

Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-82	Grab	GW				10	X	X	X	X	X	X						
MW-74	Grab	GW		6/16/20	1315	10	X	X	X	X	X	X						
MW-73	Grab	GW		6/16/20	1420	10	X	X	X	X	X	X						
MW-2A	Grab	GW				10	X	X	X	X	X	X						
MW-72	Grab	GW		6/16/20	1650	10	X	X	X	X	X	X						
OCD-6	Grab	GW		6/16/20	1605	10	X	X	X	X	X	X						
OCD-7AR	Grab	GW		6/16/20	1510	10	X	X	X	X	X	X						
MW-76	Grab	GW				10	X	X	X	X	X	X						
MW-77	Grab	GW				10	X	X	X	X	X	X						
MW-78	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier ___

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 259 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **EP (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 3 of 6

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133265
Prelogin: P763440
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-75	Grab	GW				10	X	X	X	X	X	X						
MW-83	Grab	GW				10	X	X	X	X	X	X						
MW-3	Grab	GW				10	X	X	X	X	X	X						
MW-88	Grab	GW		6/16/20	1725	10	X	X	X	X	X	X						
MW-22A	Grab	GW				10	X	X	X	X	X	X						
MW-10	Grab	GW				10	X	X	X	X	X	X						
MW-123	Grab	GW				10	X	X	X	X	X	X						
MW-4A	Grab	GW		6/16/20	1555	10	X	X	X	X	X	X						
MW-5A	Grab	GW		6/16/20	1450	10	X	X	X	X	X	X						
MW-7A	Grab	GW		6/16/20	1345	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier ___
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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Page 260 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 4 of 6

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Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
OCD-8A	Grab	GW		6/16/20	1250	11	X	X	X		X	X	X	X				
MW-1R	Grab	GW				8	X	X		X	X	X						
MW-15	Grab	GW				10	X	X	X	X	X	X						
OCD-1R	Grab	GW				10	X	X	X	X	X	X						
OCD-2A	Grab	GW				10	X	X	X	X	X	X						
OCD-3	Grab	GW				10	X	X	X	X	X	X						
OCD-4	Grab	GW				10	X	X	X	X	X	X						
MW-11A	Grab	GW				10	X	X	X	X	X	X						
OCD-5	Grab	GW				10	X	X	X	X	X	X						
MW-87	Grab	GW		6/16/20	1545	8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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Received by OCD: 11/22/2022 9:24:38 AM

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505 E. Huntland Dr, Ste 250
Austin, TX 78752

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21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 5 of 6

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Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-18A	Grab	GW		6/16/20	1630	9	X	X			X	X	X	X				
MW-70	Grab	GW		6/16/20	1800	10	X	X	X	X	X	X						
MW-124	Grab	GW		6/16/20	1710	10	X	X	X	X	X	X						
DUP-EP-01	Grab	GW		6/16/20	1200	10	X	X	X	X	X	X						
DUP-EP-02	Grab	GW				10	X	X	X	X	X	X						
DUP-EP-03	Grab	GW		~~6/16/20~~	~~1330~~ SW	10	X	X	X	X	X	X						
EB-EP-01	Grab	GW		6/16/20	1330	10	X	X	X	X	X	X						
EB-EP-02	Grab	GW		6/16/20	1725	10	X	X	X	X	X	X						
EB-EP-03	Grab	GW		6/16/20	1505	10	X	X	X	X	X	X						
EB-EP-04	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 262 of 305

TRC Solutions - Austin, TX
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Austin, TX 78752

Billing Information:
Accounts Payable
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Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~Trip Blank EP-01~~ SU	Grab	GW				1	X											
Trip Blank-EP-02	Grab	GW		6/16/20	—	1	X											
Trip Blank-EP-03	Grab	GW				1	X											
Trip Blank-EP-04	Grab	GW		6/16/20	—	1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___
Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	Sample Receipt Checklist
Scott Ude	6/17/20	0800			COC Seal Present/Intact: ___NP ___Y ___N COC Signed/Accurate: ___Y ___N Bottles arrive intact: ___Y ___N Correct bottles used: ___Y ___N Sufficient volume sent: ___Y ___N If Applicable VOA Zero Headspace: ___Y ___N Preservation Correct/Checked: ___Y ___N
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Chain of Custody Page 5 of 5

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Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133265
Prelogin: P763440
TSR: 526
PB:
Shipped Via:

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 263 of 305

DAY 1

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 13

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Julie Speer

Email To: jspeer@trccompanies.com

Project Description: REST Spring 2020

City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:

Client Project #: 330538.0000.0000

Lab Project #: TRCATX-REST

L #

Table #

Collected by (print): Scott Ude/HMI Team

Site/Facility ID #: REST (Navajo - Artesia)

P.O. #: 150726

Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:

Collected by (signature): Scott Ude

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
RW-#15C	Grab	GW				8	X	X		X	X	X						
MW-48	Grab	GW				10	X	X	X	X	X	X						
MW-130	Grab	GW				10	X	X	X	X	X	X						
KWB-4	Grab	GW				8	X	X		X	X	X						
RW-19	Grab	GW				8	X	X		X	X	X						
MW-52	Grab	GW				11	X	X	X		X	X	X	X				
MW-109	Grab	GW				10	X	X	X	X	X	X						
MW-110	Grab	GW				10	X	X	X	X	X	X						
RW-12R	Grab	GW				8	X	X		X	X	X						
RW-113	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx ✓ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM

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Page 264 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day
Date Results Needed
Quote #

Chain of Custody Page 2 of 13

Pace Analytical® National Center for Testing & Innovation
32065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
KWB-8	Grab	GW				9	X	X			X	X	X	X				
RW-22	Grab	GW				8	X	X		X	X	X						
RW-20A	Grab	GW				8	X	X		X	X	X						
RW-20B	Grab	GW				8	X	X		X	X	X						
RW-13R	Grab	GW				8	X	X		X	X	X						
RW-14R	Grab	GW				8	X	X		X	X	X						
MW-133	Grab	GW				10	X	X	X	X	X	X						
MW-134	Grab	GW				10	X	X	X	X	X	X						
RA-4798	Grab	GW				5	X				X	X						
RA-4196	Grab	GW				5	X				X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___UPS ✓FedEx ___Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **REST (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day
Quote #
Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 13

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
RA-3156	Grab	GW				5	X				X	X						
RA-313	Grab	GW				5	X				X	X						
KWB-7	Grab	GW				9	X	X			X	X	X	X				
MW-135	Grab	GW				10	X	X	X	X	X	X						
KWB-11A	Grab	GW				11	X	X	X		X	X	X	X				
KWB-11B	Grab	GW				11	X	X	X		X	X	X	X				
MW-115	Grab	GW		6/16/20	920	10	X	X	X	X	X	X						
MW-114	Grab	GW		6/16/20	1020	10	X	X	X	X	X	X						
MW-117	Grab	GW		6/16/20	1115	10	X	X	X	X	X	X						
MW-118	Grab	SS		6/16/20	1020	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 266 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

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City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Red Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 4 of 13

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
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L#
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-119	Grab	GW		6/16/20	945	10	X	X	X	X	X	X						
MW-136	Grab	GW				11	X	X	X		X	X	X	X				
MW-126A	Grab	GW		6/16/20	1505	10	X	X	X	X	X	X						
MW-126B	Grab	GW		6/16/20	1425	10	X	X	X	X	X	X						
MW-127	Grab	GW				10	X	X	X	X	X	X						
MW-129	Grab	GW				10	X	X	X	X	X	X						
RW-#18A	Grab	GW		~~6/16/20~~	~~950~~ SU	6	X			X	X	X						
KWB-1A	Grab	GW				9	X	X			X	X	X	X				
KWB-10R	Grab	GW				8	X	X		X	X	X						
MW-131	Grab	GW		6/16/20	1320	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: RW-#18A replacement sample (6/19/20, 10:30) SU
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

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apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 5 of 13

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #:
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
KWB-5	Grab	GW				8	X	X		X	X	X						
MW-111	Grab	GW				10	X	X	X	X	X	X						
KWB-6	Grab	GW				11	X	X		X	X	X				X		
MW-112	Grab	GW				10	X	X	X	X	X	X						
MW-132	Grab	GW				10	X	X	X	X	X	X						
MW-57	Grab	GW		6/16/20	1525	10	X	X	X	X	X	X						
RW-#11-0	Grab	GW				8	X	X		X	X	X						
KWB-12A	Grab	GW		6/16/20	1305	11	X	X	X		X	X	X	X				
KWB-12B	Grab	GW		6/16/20	1355	11	X	X	X		X	X	X	X				
KWB-2R	Grab	GW		~~6/16/20~~		8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

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Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day
Date Results Needed
Quote #

Chain of Custody Page 6 of 13

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
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Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
Pres Chk																		
MW-58	Grab	GW				9	X	X			X	X	X	X				
KWB-13	Grab	GW		6/16/20	1755	9	X	X			X	X	X	X				
MW-103	Grab	GW		6/16/20	1310	10	X	X	X	X	X	X						
MW-104	Grab	GW		6/16/20	1415	10	X	X	X	X	X	X						
MW-64	Grab	GW		6/16/20	1530	10	X	X	X	X	X	X						
MW-65	Grab	GW				10	X	X	X	X	X	X						
RW-5R	Grab	GW				8	X	X		X	X	X						
MW-102	Grab	GW		6/16/20	1650	10	X	X	X	X	X	X						
RW-4	Grab	GW				8	X	X		X	X	X						
RW-6	Grab	GW				8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS ✓ FedEx ____ Courier ____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 269 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

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City/State Collected: **Artesia, NM**

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Immediately Packed on Ice N ____ Y ✓
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___ Same Day ___ Five Day
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Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 7 of 13

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12065 Lebanon Rd
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Phone: 800-767-5859
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L #
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-99	Grab	GW				10	X	X	X	X	X	X						
MW-66	Grab	GW				11	X	X	X		X	X	X	X				
MW-28	Grab	GW				11	X	X	X		X	X	X	X				
MW-59	Grab	GW				10	X	X	X	X	X	X						
MW-60	Grab	GW				11	X	X	X		X	X	X	X				
MW-107	Grab	GW				10	X	X	X	X	X	X						
MW-128	Grab	GW				10	X	X	X	X	X	X						
MW-125	Grab	GW		6/16/20	1055	10	X	X	X	X	X	X						
MW-116	Grab	GW		~~6/16/20~~	~~1115~~ SU	10	X	X	X	X	X	X						
UG-3R	Grab	GW		6/15/20	1630	11	X	X	X		X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: MW-116 replacement sample (6/19/20 ; 9:30) SU
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

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Chain of Custody Page 8 of 13

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Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
UG-4	Grab	GW		6/15/20	1720	11	X	X	X		X	X	X	X				
UG-1	Grab	GW		6/15/20	1810	11	X	X	X		X	X	X	X				
UG-2	Grab	GW		6/15/20	1910	11	X	X	X		X	X	X	X				
MW-101	Grab	GW		6/16/20	1505	10	X	X	X	X	X	X						
MW-105	Grab	GW				10	X	X	X	X	X	X						
RW-2	Grab	GW				12	X	X	X	X	X	X			X			
MW-61	Grab	GW				10	X	X	X	X	X	X						
MW-62	Grab	GW				10	X	X	X	X	X	X						
MW-93	Grab	GW				12	X	X	X	X	X	X			X			
MW-43	Grab	GW				11	X	X	X		X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking # _____

Sample Receipt Checklist
COC Seal Present/Intact: NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

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Lab Project # **TRCATX-REST**

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P.O. # **150726**

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Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
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Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 9 of 13

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L#
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-137	Grab	GW				13	X	X	X		X	X	X	X	X			
MW-138	Grab	GW				13	X	X	X		X	X	X	X	X			
MW-23	Grab	GW				10	X	X	X	X	X	X						
MW-39	Grab	GW		6/16/20	1135	10	X	X	X	X	X	X						
MW-98	Grab	GW		6/16/20	1355	10	X	X	X	X	X	X						
RW-10	Grab	GW		6/16/20	925	10	X	X	X	X	X	X						
MW-40	Grab	GW		6/16/20	925	10	X	X	X	X	X	X						
MW-41	Grab	GW		6/16/20	1040	10	X	X	X	X	X	X						
RW-9	Grab	GW		6/16/20	1235	10	X	X	X	X	X	X						
MW-42	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF: / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 10 of 13

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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-29	Grab	GW		6/16/20	1020	10	X	X	X	X	X	X						
RW-#16B	Grab	GW		6/16/20	940	8	X	X		X	X	X						
MW-106	Grab	GW		6/16/20	1625	10	X	X	X	X	X	X						
MW-139	Grab	GW		6/16/20	1145	10	X	X	X	X	X	X						
MW-50	Grab	GW		6/16/20	1235	8	X	X		X	X	X						
MW-97	Grab	GW				12	X	X	X	X	X	X			X			
MW-92	Grab	GW				10	X	X	X	X	X	X						
RW-1	Grab	GW				10	X	X	X	X	X	X						
MW-91	Grab	GW		6/16/20	1400	10	X	X	X	X	X	X						
MW-90	Grab	GW		6/16/20	1445	10	X	X	X	X	X	X						

Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 11 of 13

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Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-96	Grab	GW		6/16/20	1530	10	X	X	X	X	X	X						
MW-94	Grab	GW				10	X	X	X	X	X	X						
RW-8	Grab	GW				8	X	X		X	X	X						
MW-67	Grab	GW				13	X	X	X		X	X	X	X	X			
MW-95	Grab	GW		6/16/20	1645	10	X	X	X	X	X	X						
RW-7	Grab	GW				10	X	X	X	X	X	X						
RW-#17A	Grab	GW				10	X	X	X	X	X	X						
DUP-REST-01	Grab	GW				10	X	X	X	X	X	X						
DUP-REST-02	Grab	GW		6/16/20	1425	10	X	X	X	X	X	X						
DUP-REST-03	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
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apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 12 of 13

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L #
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
DUP-REST-04	Grab	GW				11	X	X	X		X	X	X	X				
DUP-REST-05	Grab	GW		6/16/20	1200	11	X	X	X		X	X	X	X				
EB-REST-01	Grab	GW				10	X	X	X	X	X	X						
EB-REST-02	Grab	GW		6/16/20	1435	10	X	X	X	X	X	X						
EB-REST-03	Grab	GW				10	X	X	X	X	X	X						
EB-REST-04	Grab	GW				11	X	X	X		X	X	X	X				
EB-REST-05	Grab	GW		6/16/20	1415	11	X	X	X		X	X	X	X				
TRIP BLANK-REST-01	Grab	GW				1	X											
TRIP BLANK-REST-02	Grab	GW		6/16/20	—	1	X											
TRIP BLANK-REST-03	Grab	GW		~~6/16/20~~	~~—~~ SM	1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks: Trip Blank-REST-03 replacement sample (6/19/20) SM
Dissolved metals field-filtered.
pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: Julie Speer
Email To: jspeer@trccompanies.com

Project Description: REST Spring 2020
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project #: 330538.0000.0000
Lab Project #: TRCATX-REST

Collected by (print): Scott Ude/HMI Team
Site/Facility ID #: REST (Navajo - Artesia)
P.O. #: 150726

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Pres. Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
Trip Blank-REST-04	Grab	GW		6/16/20	—	1	X											
Trip Blank-REST-05	Grab	GW				1	X											

Chain of Custody Page 1 of 1

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Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Received by OCD: 11/22/2022 9:24:38 AM

DAY 1

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **TEL Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-TEL**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **TEL (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
TEL-4	Grab	GW		6/16/20	1255	10	X	X	X	X	X	X						
TEL-3	Grab	GW				10	X	X	X	X	X	X						
TEL-2	Grab	GW		6/16/20	1125 SM	10	X	X	X	X	X	X						
TEL-1	Grab	GW	SM	6/16/20	1025 SM	10	X	X	X	X	X	X						
MW-49	Grab	GW		6/16/20	1340	11	X	X	X		X	X	X	X				
DUP-TEL-01	Grab	GW		6/16/20	1200	10	X	X	X	X	X	X						
EB-TEL-01	Grab	GW		6/16/20	1140	10	X	X	X	X	X	X						
Trip Blank-TEL-01	Grab	GW		6/16/20	—	1	X											

Chain of Custody Page 1 of 1

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L#
Table #
Acctnum: TRCATX
Template: T118731
Prelogin: P763442
TSR: 526
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 277 of 305

DAY 1

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **TMD Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-TMD**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **TMD (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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L #

Table #

Acctnum: **TRCATX**
Template: **T133687**
Prelogin: **P763444**
TSR: **526**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-25	Grab	GW				8	X	X		X	X	X						
MW-20	Grab	GW				8	X	X		X	X	X						
NP-1	Grab	GW				5	X				X	X						
MW-8	Grab	GW				10	X	X	X	X	X	X						
MW-21	Grab	GW				10	X	X	X	X	X	X						
MW-71	Grab	GW				9	X	X			X	X	X	X				
MW-68	Grab	GW				8	X	X		X	X	X						
MW-27	Grab	GW				8	X	X		X	X	X						
MW-89	Grab	GW				8	X	X		X	X	X						
MW-16	Grab	GW				8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier ___

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Page 278 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **TMD Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-TMD**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **TMD (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133687**
Prelogin: **P763444**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-26	Grab	GW				8	X	X		X	X	X						
MW-46R	Grab	GW				8	X	X		X	X	X						
TRIP BLANK-TMD-01	Grab	GW				1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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DAY 1

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **NCL Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-NCL**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **NCL (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133457
Prelogin: P763441
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-56	Grab	GW		6/16/20	1125	8	X	X		X	X	X						
MW-45	Grab	GW				9	X	X			X	X	X	X				
NCL-34A	Grab	GW				8	X	X		X	X	X						
NCL-33	Grab	GW				8	X	X		X	X	X						
NCL-44	Grab	GW				8	X	X		X	X	X						
NCL-32	Grab	GW				8	X	X		X	X	X						
MW-108	Grab	GW				8	X	X		X	X	X						
NCL-31	Grab	GW				8	X	X		X	X	X						
MW-55	Grab	GW		6/16/20	1040	11	X	X	X		X	X	X	X				
MW-18	Grab	GW				9	X	X			X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 280 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: Julie Speer
Email To: jspeer@trccompanies.com

Project Description: NCL Spring 2020
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project # 330538.0000.0000
Lab Project # TRCATX-NCL

Collected by (print): Scott Ude/HMI Team
Site/Facility ID # NCL (Navajo - Artesia)
P.O. # 150726

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 2 of 2

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133457
Prelogin: P763441
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-54A	Grab	GW		6/16/20	955	8	X	X		X	X	X						
NCL-49	Grab	GW		6/16/20	1045	8	X	X		X	X	X						
~~MW-53~~	~~Grab~~	~~GW~~				~~8~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~		missing due to construction				
DUP-NCL-01	Grab	GW		6/16/20	1000	8	X	X		X	X	X						
EB-NCL-01	Grab	GW				8	X	X		X	X	X						
TRIP BLANK-NCL-01	Grab	GW		6/16/20	—	1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___ N ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	0800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: ___ If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time: Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 281 of 305

DAY 2

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 1 of 6

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-6A~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-85~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
MW-86	Grab	GW		6/17/20	1415	11	X	X	X		X	X	X	X				
~~MW-120~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-121~~	Grab	GW				10	X	X	X	X	X	X						
MW-84	Grab	GW		6/17/20	1330	10	X	X	X	X	X	X						
MW-122	Grab	GW		6/17/20	940	10	X	X	X	X	X	X						
MW-81	Grab	GW		6/17/20	1025	10	X	X	X	X	X	X						
MW-80	Grab	GW		6/17/20	1110	10	X	X	X	X	X	X						
MW-79	Grab	GW		6/17/20	1155	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH: _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: ___°C Bottles Received:	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **EP (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative — Chain of Custody Page 2 of 6

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133265
Prelogin: P763440
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-82	Grab	GW		6/17/20	1245	10	X	X	X	X	X	X						
~~MW-74~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-73~~	Grab	GW				10	X	X	X	X	X	X						
MW-2A	Grab	GW		6/17/20	855	10	X	X	X	X	X	X						
~~MW-72~~	Grab	GW				10	X	X	X	X	X	X						
~~OCD-6~~	Grab	GW				10	X	X	X	X	X	X						
~~OCD-7AR~~	Grab	GW				10	X	X	X	X	X	X						
MW-76	Grab	GW		6/17/20	1325	10	X	X	X	X	X	X						
MW-77	Grab	GW		6/17/20	1410	10	X	X	X	X	X	X						
MW-78	Grab	GW		6/17/20	1455	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS ✓ FedEx Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 283 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **EP (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 3 of 6

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133265
Prelogin: P763440
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-75	Grab	GW		6/17/20	1540	10	X	X	X	X	X	X						
MW-83	Grab	GW		6/17/20	1240	10	X	X	X	X	X	X						
MW-3	Grab	GW		6/17/20	1140	10	X	X	X	X	X	X						
~~MW-88~~	Grab	GW				10	X	X	X	X	X	X						
MW-22A	Grab	GW		6/17/20	1025	10	X	X	X	X	X	X						
MW-10	Grab	GW		6/17/20	940	10	X	X	X	X	X	X						
MW-123	Grab	GW		6/17/20	855	10	X	X	X	X	X	X						
~~MW-4A~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-5A~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-7A~~	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeOH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Received by OCD: 11/22/2022 9:24:38 AM

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **EP (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 4 of 6

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#

Table #

Acctnum: **TRCATX**

Template: **T133265**

Prelogin: **P763440**

TSR: **526**

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~OCD-8A~~	Grab	GW				11	X	X	X		X	X	X	X				
MW-1R	Grab	GW		6/17/20	1000	8	X	X		X	X	X						
MW-15	Grab	GW		6/17/20	1045	10	X	X	X	X	X	X						
OCD-1R	Grab	GW		6/17/20	1415	10	X	X	X	X	X	X						
OCD-2A	Grab	GW		6/17/20	1325	10	X	X	X	X	X	X						
OCD-3	Grab	GW		6/17/20	1145	10	X	X	X	X	X	X						
OCD-4	Grab	GW		6/17/20	1055	10	X	X	X	X	X	X						
MW-11A	Grab	GW		6/17/20	1235	10	X	X	X	X	X	X						
OCD-5	Grab	GW		6/17/20	1010	10	X	X	X	X	X	X						
~~MW-87~~	Grab	GW				8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
___ If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 285 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **EP (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 3 of 6

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133265
Prelogin: P763440
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-18A~~	Grab	GW				9	X	X			X	X	X	X				
~~MW-70~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-124~~	Grab	GW				10	X	X	X	X	X	X						
~~DUP-EP-01~~	Grab	GW				10	X	X	X	X	X	X						
DUP-EP-02	Grab	GW		6/17/20	1000	10	X	X	X	X	X	X						
DUP-EP-03	Grab	GW		6/17/20	1100	10	X	X	X	X	X	X						
~~EB-EP-01~~	Grab	GW				10	X	X	X	X	X	X						
~~EB-EP-02~~	Grab	GW				10	X	X	X	X	X	X						
~~EB-EP-03~~	Grab	GW				10	X	X	X	X	X	X						
EB-EP-04	Grab	GW		6/17/20	1210	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **EP Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-EP**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **EP (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 6 of 6

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#

Table #

Acctnum: **TRCATX**
Template: **T133265**
Prelogin: **P763440**
TSR: **526**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~Trip Blank-EP-01~~ Su	Grab	GW				1	X											
~~Trip Blank-EP-02~~	Grab	GW				1	X											
Trip Blank-EP-03	Grab	GW		6/17/20	—	1	X											
~~Trip Blank-EP-04~~	Grab	GW				1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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DAY 2

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859

Chain of Custody Page 1 of 13

L#
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~RW-#15G~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~MW-48~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
MW-130	Grab	GW		6/17/20	1410	10	X	X	X	X	X	X						
~~KWB-4~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~RW-19~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
MW-52	Grab	GW		6/17/20	1320	11	X	X	X		X	X	X	X				
MW-109	Grab	GW		6/17/20	1235	10	X	X	X	X	X	X						
MW-110	Grab	GW		6/17/20	1150	10	X	X	X	X	X	X						
RW-12R	Grab	GW		6/17/20	1535	8	X	X		X	X	X						
~~RW-113~~ MW-113	Grab	GW		6/17/20	1510	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Lab - print RW-113 should have been "MW-113"
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 2 of 13

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~KWB-8~~ (LNAPL)	Grab	GW				9	X	X			X	X	X	X				
~~RW-22~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~RW-20A~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~RW-20B~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~RW-13R~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~RW-14R~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
MW-133 (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
MW-134	Grab	GW		6/17/20	1340	10	X	X	X	X	X	X						
RA-4798	Grab	GW		6/17/20	1605	5	X				X	X						
RA-4196	Grab	GW		6/17/20	1550	5	X				X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

__ Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

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Analysis / Container / Preservative

Chain of Custody Page 3 of 13

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
RA-3156	Grab	GW		6/17/20	1520	5	X				X	X						
RA-313	Grab	GW		6/17/20	855	5	X				X	X						
KWB-7	Grab	GW		6/16/20	1330	9	X	X			X	X	X	X				
MW-135	Grab	GW		6/17/20	1420	10	X	X	X	X	X	X						
KWB-11A	Grab	GW		6/16/20	1425	11	X	X	X		X	X	X	X				
KWB-11B	Grab	GW		6/16/20	1515	11	X	X	X		X	X	X	X				
~~MW-115~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-114~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-117~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-118~~	Grab	SS				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp ___ °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 290 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day
Date Results Needed
Quote #

Chain of Custody Page 4 of 13

Pace Analytical® National Center for Testing & Innovation
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-119~~	Grab	GW				10	X	X	X	X	X	X						
MW-136	Grab	GW		6/17/20	915	11	X	X	X		X	X	X	X				
~~MW-126A~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-126B~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-127~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-129~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~RW #18A~~	Grab	GW				6	X			X	X	X						
KWB-1A	Grab	GW		6/17/20	1000	9	X	X			X	X	X	X				
~~KWB-10R~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~MW-131~~	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS ✓ FedEx Courier
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
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TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
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21 Griffin Road North
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Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **REST (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #
Date Results Needed

Chain of Custody Page 5 of 13

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~KWB-5~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
MW-111	Grab	GW		6/17/20	1045	10	X	X	X	X	X	X						
~~KWB-6~~ (LNAPL)	Grab	GW				11	X	X		X	X	X				X		
~~MW-112~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-132~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-57~~	Grab	GW				10	X	X	X	X	X	X						
~~RW-#11-0~~ (DRY)	Grab	GW				8	X	X		X	X	X						
~~KWB-12A~~	Grab	GW				11	X	X	X		X	X	X	X				
~~KWB-12B~~	Grab	GW				11	X	X	X		X	X	X	X				
~~KWB-2R~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 292 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ____ Same Day ____ Five Day ____ Next Day ____ 5 Day (Rad Only) ____ Two Day ____ 10 Day (Rad Only) ____ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 6 of 13

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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-58~~ (LNAPL)	Grab	GW				9	X	X			X	X	X	X				
~~KWB-13~~	Grab	GW				9	X	X			X	X	X	X				
~~MW-103~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-104~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-64~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-65~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~RW-5R~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~MW-102~~	Grab	GW				10	X	X	X	X	X	X						
RW-4	Grab	GW		6/17/20	915	8	X	X		X	X	X						
~~RW-6~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Received by OCD: 11/22/2022 9:24:38 AM

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **REST (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #
Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 7 of 13

Pace Analytical® National Center for Testing & Innovation
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-99	Grab	GW		6/17/20	1250	10	X	X	X	X	X	X						
MW-66	Grab	GW		6/17/20	1245	11	X	X	X		X	X	X	X				
MW-28	Grab	GW		6/17/20	1340	11	X	X	X		X	X	X	X				
MW-59	Grab	GW		6/17/20	1015	10	X	X	X	X	X	X						
MW-60	Grab	GW		6/17/20	1145	11	X	X	X		X	X	X	X				
~~MW-107~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-128~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-125~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-116~~	Grab	GW				10	X	X	X	X	X	X						
~~UG-3R~~	Grab	GW				11	X	X	X		X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___UPS ✓FedEx ___Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 294 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
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apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **REST (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 8 of 13

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L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~UG-4~~	Grab	GW				11	X	X	X		X	X	X	X				
~~UG-1~~	Grab	GW				11	X	X	X		X	X	X	X				
~~UG-2~~	Grab	GW				11	X	X	X		X	X	X	X				
~~MW-101~~	Grab	GW				10	X	X	X	X	X	X						
MW-105	Grab	GW		6/17/20	925	10	X	X	X	X	X	X						
~~RW-2~~ (LNAPL)	Grab	GW				12	X	X	X	X	X	X			X			
MW-61	Grab	GW		6/17/20	1025	10	X	X	X	X	X	X						
MW-62	Grab	GW		6/17/20	1220	10	X	X	X	X	X	X						
MW-93	Grab	GW		6/17/20	1125	12	X	X	X	X	X	X			X			
MW-43	Grab	GW		6/17/20	1425	11	X	X	X		X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __ NP __ Y __ N
COC Signed/Accurate: __ Y __ N
Bottles arrive intact: __ Y __ N
Correct bottles used: __ Y __ N
Sufficient volume sent: __ Y __ N
If Applicable
VOA Zero Headspace: __ Y __ N
Preservation Correct/Checked: __ Y __ N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

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apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **REST (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 9 of 13

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L#

Table #

Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-137~~ (LNAPL)	Grab	GW				13	X	X	X		X	X	X	X	X			
~~MW-138~~ (LNAPL)	Grab	GW				13	X	X	X		X	X	X	X	X			
MW-23	Grab	GW		6/17/20	1325	10	X	X	X	X	X	X						
~~MW-39~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-98~~	Grab	GW				10	X	X	X	X	X	X						
~~RW-10~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-40~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-41~~	Grab	GW				10	X	X	X	X	X	X						
~~RW-9~~	Grab	GW				10	X	X	X	X	X	X						
MW-42	Grab	GW		6/17/20	1420	10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

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apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **REST (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day
Date Results Needed
Quote #

Chain of Custody Page 10 of 13

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Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-29~~	Grab	GW				10	X	X	X	X	X	X						
~~RW-#16B~~	Grab	GW				8	X	X		X	X	X						
~~MW-106~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-139~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-50~~	Grab	GW				8	X	X		X	X	X						
~~MW-97~~ (LNAPL)	Grab	GW				12	X	X	X	X	X	X			X			
~~MW-92~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~RW-1~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~MW-91~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-90~~	Grab	GW				10	X	X	X	X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
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Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **REST Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

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Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
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___ Three Day
Date Results Needed
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Analysis / Container / Preservative

Chain of Custody Page 11 of 13

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L#
Table #
Acctnum: **TRCATX**
Template: **T133463**
Prelogin: **P763304**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-96~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-94~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~RW-8~~ (LNAPL)	Grab	GW				8	X	X		X	X	X						
~~MW-67~~ (LNAPL)	Grab	GW				13	X	X	X		X	X	X	X	X			
~~MW-95~~	Grab	GW				10	X	X	X	X	X	X						
RW-7	Grab	GW		6/17/20	1220	10	X	X	X	X	X	X						
RW-#17A	Grab	GW		6/17/20	1510	10	X	X	X	X	X	X						
DUP-REST-01	Grab	GW		6/17/20	1200	10	X	X	X	X	X	X						
~~DUP-REST-02~~	Grab	GW		~~6/17/20~~	~~1100~~ SM	10	X	X	X	X	X	X						
DUP-REST-03	Grab	GW		6/17/20	1100	10	X	X	X	X	X	X						

* Matrix:
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GW - Groundwater B - Bioassay
WW - WasteWater
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OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS ✓ FedEx ___ Courier ___
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Released to Imaging: 11/22/2022 9:31:39 AM

Page 298 of 305

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City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-REST**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **REST (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
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Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
DUP-REST-04	Grab	GW		6/17/20	1000	11	X	X	X		X	X	X	X				
~~DUP-REST-05~~	Grab	GW				11	X	X	X		X	X	X	X				
EB-REST-01	Grab	GW		6/17/20	1530	10	X	X	X	X	X	X						
~~EB-REST-02~~	Grab	GW				10	X	X	X	X	X	X						
EB-REST-03	Grab	GW		6/17/20	1400	10	X	X	X	X	X	X						
EB-REST-04	Grab	GW		6/17/20	1205	11	X	X	X		X	X	X	X				
~~EB-REST-05~~	Grab	GW				11	X	X	X		X	X	X	X				
TRIP BLANK-REST-01	Grab	GW				1	X											
~~TRIP BLANK-REST-02~~	Grab	GW				1	X											
~~TRIP BLANK-REST-03~~	Grab	GW				1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier: __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
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If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Chain of Custody Page 12 of 13

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L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 299 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: Julie Speer
Email To: jspeer@trccompanies.com

Project Description: REST Spring 2020
City/State Collected: Artesia, NM

Phone: 512-684-3170
Fax:
Client Project # 330538.0000.0000
Lab Project # TRCATX-REST

Collected by (print): Scott Ude/HMI Team
Site/Facility ID # REST (Navajo - Artesia)
P.O. # 150726

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 13 of 13

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133463
Prelogin: P763304
TSR: 526
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~Trip Blank-REST-04~~	Grab	GW				1	X											
~~Trip Blank-REST-05~~	Grab	GW				1	X											

Pres Chk

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 300 of 305

DAY 2

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **TEL Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330538.0000.0000**
Lab Project # **TRCATX-TEL**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID # **TEL (Navajo - Artesia)**
P.O. # **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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Phone: 615-758-5858
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L#
Table #
Acctnum: TRCATX
Template: T118731
Prelogin: P763442
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~TEL-4~~	Grab	GW				10	X	X	X	X	X	X						
~~TEL-3~~ (LNAPL)	Grab	GW				10	X	X	X	X	X	X						
~~TEL-2~~	Grab	GW				10	X	X	X	X	X	X						
~~TEL-1~~	Grab	GW				10	X	X	X	X	X	X						
~~MW-49~~	Grab	GW				11	X	X	X		X	X	X	X				
~~DUP-TEL-01~~	Grab	GW				10	X	X	X	X	X	X						
~~EB-TEL-01~~	Grab	GW				10	X	X	X	X	X	X						
~~Trip Blank-TEL-01~~	Grab	GW				1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __N __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 301 of 305

DAY 2

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **TMD Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-TMD**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **TMD (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133687**
Prelogin: **P763444**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-25	Grab	GW		6/17/20	910	8	X	X		X	X	X						
MW-20	Grab	GW		6/17/20	1235	8	X	X		X	X	X						
NP-1	Grab	GW		6/17/20	940	5	X				X	X						
MW-8	Grab	GW		6/17/20	1130	10	X	X	X	X	X	X						
MW-21	Grab	GW		6/17/20	1035	10	X	X	X	X	X	X						
MW-71	Grab	GW		6/17/20	1415	9	X	X			X	X	X	X				
MW-68	Grab	GW		6/17/20	940	8	X	X		X	X	X						
MW-27	Grab	GW		6/17/20	1325	8	X	X		X	X	X						
MW-89	Grab	GW		6/17/20	1040	8	X	X		X	X	X						
MW-16	Grab	GW		6/17/20	1135	8	X	X		X	X	X						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Page 302 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **TMD Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-TMD**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **TMD (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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Fax: 615-758-5859

L #
Table #
Acctnum: **TRCATX**
Template: **T133687**
Prelogin: **P763444**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
MW-26	Grab	GW		6/17/20	1230	8	X	X		X	X	X						
MW-46R	Grab	GW		6/17/20	1345	8	X	X		X	X	X						
TRIP BLANK-TMD-01	Grab	GW		6/17/20	—	1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
___ UPS ✓ FedEx ___ Courier: _____

Tracking # _____

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	6/17/20	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

Page 303 of 305

DAY 2

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com**

Project Description: **NCL Spring 2020**

City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330538.0000.0000**

Lab Project # **TRCATX-NCL**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID # **NCL (Navajo - Artesia)**

P.O. # **150726**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Quote #

Chain of Custody Page 1 of 2

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Phone: 800-767-5859
Fax: 615-758-5859

L#

Table #

Acctnum: **TRCATX**
Template: **T133457**
Prelogin: **P763441**
TSR: **526**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions,NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (lab only)
~~MW-56~~	Grab	GW				8	X	X		X	X	X						
MW-45	Grab	GW		6/17/20	1520	9	X	X			X	X	X	X				
NCL-34A	Grab	GW		6/17/20	1310	8	X	X		X	X	X						
NCL-33	Grab	GW		6/17/20	1355	8	X	X		X	X	X						
NCL-44	Grab	GW		6/17/20	1135	8	X	X		X	X	X						
NCL-32	Grab	GW		6/17/20	1050	8	X	X		X	X	X						
MW-108	Grab	GW		6/17/20	925	8	X	X		X	X	X						
NCL-31	Grab	GW		6/17/20	1005	8	X	X		X	X	X						
~~MW-55~~	Grab	GW				11	X	X	X		X	X	X	X				
MW-18	Grab	GW		6/17/20	1440	9	X	X			X	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__UPS ✓FedEx __Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
Scott Ude	6/17/20	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM

Released to Imaging: 11/22/2022 9:31:39 AM

Page 304 of 305

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trccompanies.com**

Project Description: **NCL Spring 2020**
City/State Collected: **Artesia, NM**

Phone: **512-684-3170**
Fax:
Client Project #: **330538.0000.0000**
Lab Project #: **TRCATX-NCL**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #: **NCL (Navajo - Artesia)**
P.O. #: **150726**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ____ Y ✓
Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day
Date Results Needed
Quote #

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: TRCATX
Template: T133457
Prelogin: P763441
TSR: 526
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC	DRO	GRO	Total/Dissolved Short List Metals	Cations (from "total metals" bottle)	Anions, NO2NO3, TDS	Total/Dissolved Long List Metals	Cyanide	SVOCs (8270)	EDB (8011)	Remarks	Sample # (Lab only)
~~MW-54A~~	Grab	GW				8	X	X		X	X	X						
~~NCL-49~~	Grab	GW				8	X	X		X	X	X						
~~MW-53~~	~~Grab~~	~~GW~~				~~8~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~					Missing due to construction	
~~DUP-NCL-01~~	Grab	GW				8	X	X		X	X	X						
EB-NCL-01	Grab	GW		6/17/20	1100	8	X	X		X	X	X						
~~TRIP-BLANK-NCL-01~~	Grab	GW				1	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks:
Dissolved metals field-filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
Scott Ude	6/17/20	1700		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Received by OCD: 11/22/2022 9:24:38 AM
Released to Imaging: 11/22/2022 9:31:39 AM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 160748

CONDITIONS

Operator: NAVAJO REFINING COMPANY, L.L.C. P.O. Box 159 Artesia, NM 88211	OGRID: 15694
	Action Number: 160748
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
scwells	Accepted for Record Retention Purposes-Only	11/22/2022